

Burlington Development Review Board

149 Church Street, City Hall

Burlington, VT 05401

www.burlingtonvt.gov/PZ/DRB

Phone: (802) 865-7188

Fax: (802) 865-7195

Austin Hart, Chair
Michael Long
Jonathan Stevens
Brad Rabinowitz
Missa Aloisi
Israel Smith
A.J. LaRosa
Alexandra Zipparo (Alt.)
Jim Drummond (Alt.)



BURLINGTON DEVELOPMENT REVIEW BOARD

Tuesday April 21, 2015

PUBLIC HEARING NOTICE

The Burlington Development Review Board will hold a meeting on **Tuesday April 21, 2015 at 5:00 p.m.** in **Contois Auditorium, City Hall.**

1. **15-0801PD; 140 Grove St (RL, Ward 1) Ireland Grove Street Properties**
Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 232 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements
2. **15-0868CU; 404 College St (RH, Ward 1E) Dunlap Riehle**
Change of use from duplex to single residential unit and boarding house
3. **15-0881HO; 115 Glen Rd (RL, Ward 6S) Ranjit Singh / Danielle Rouleau**
Establish bakery home occupation

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.

Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential.

This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drdb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

The programs and services of the City of Burlington are accessible to people with disabilities. Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).

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BURLINGTON DEVELOPMENT REVIEW BOARD

Tuesday, April 21, 2015, 5:00 p.m.

Contois Auditorium, City Hall, 149 Church Street, Burlington, VT

AGENDA

- I. Agenda**
- II. Communications**
- III. Minutes**
- IV. Consent Agenda**
 - 1. 15-0881HO; 115 Glen Rd (RL, Ward 6S) Ranjit Singh / Danielle Rouleau**
Establish bakery home occupation (Project Manager, Mary O'Neil)
- V. Public Hearing**
 - 1. 15-0868CU; 404 College St (RH, Ward 1E) Dunlap Riehle**
Change of use from duplex to single residential unit and boarding house (Project Manager, Ken Lerner)
 - 2. 15-0801PD; 140 Grove St (RL, Ward 1) Ireland Grove Street Properties**
Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 232 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements (Project Manager, Scott Gustin)
- VI. Sketch Plan**
 - 1. 15-0896SP; 80-94 Colchester Ave (I, Ward 1E) Ed & Frank von Turkovich**
Sketch plan review of proposal to construct 79 apartment units in single building, surface, and underground parking (Project Manager, Mary O'Neil)
- VII. Other Business**
- VIII. Adjournment**

Applications and Plans may be viewed in the Planning and Zoning office, (City Hall, First Floor, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.

All staff comments, plans and supporting documents will be available on the Planning and Zoning website at: www.burlingtonvt.gov/pz/drb/agendas approximately one week before the hearing.

Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office and Development Review Board is considered public and cannot be kept confidential.

This agenda is distributed to: adjacent property owners of projects before the Development Review Board, Neighborhood Planning Assemblies, City Councilors, City Departments and interested parties. You may direct written comments to the Planning and Zoning Department, at the above address. Inquiries may be made by calling 865-7188. Oral comments may be given at the meeting by any persons on any project listed on the Agenda.

DESCRIPTION OF EXTERIOR MATERIALS

- 1

SIDING TYPE - 1

VINYL LAP SIDING WITH 4 INCH EXPOSURE.
COLOR AND TEXTURE AS SELECTED BY ARCHITECT.
- 2

SIDING TYPE - 2

VINYL 'SHINGLE' SIDING WITH 6 INCH EXPOSURE.
COLOR AND TEXTURE AS SELECTED BY ARCHITECT.
- 3

STANDING AND
RUNNING TRIM

TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL.
COLOR AS SELECTED BY ARCHITECT.
SIZES AS FOLLOWS:

WINDOW TRIM: 1 X 4 DOOR TRIM: 1 X 4

CORNER TRIM: 1 X 8 FRIEZE TRIM: 1 X 10
- 4

ROOFING:

ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.)
COLOR AS SELECTED BY ARCHITECT.
- 5

WINDOWS:

EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON
FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35.
COLOR SELECTED BY ARCHITECT.
- 6

EXTERIOR DOORS:

INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING.
MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A
MAXIMUM U-FACTOR OF 0.35 FOR GLAZING.
COLOR AS SELECTED BY ARCHITECT.
- 7

DECKING:

DECKING SHALL CONSIST OF COMPOSITE MATERIAL.
COLOR AS SELECTED BY ARCHITECT.
- 8

PORCH RAILINGS:

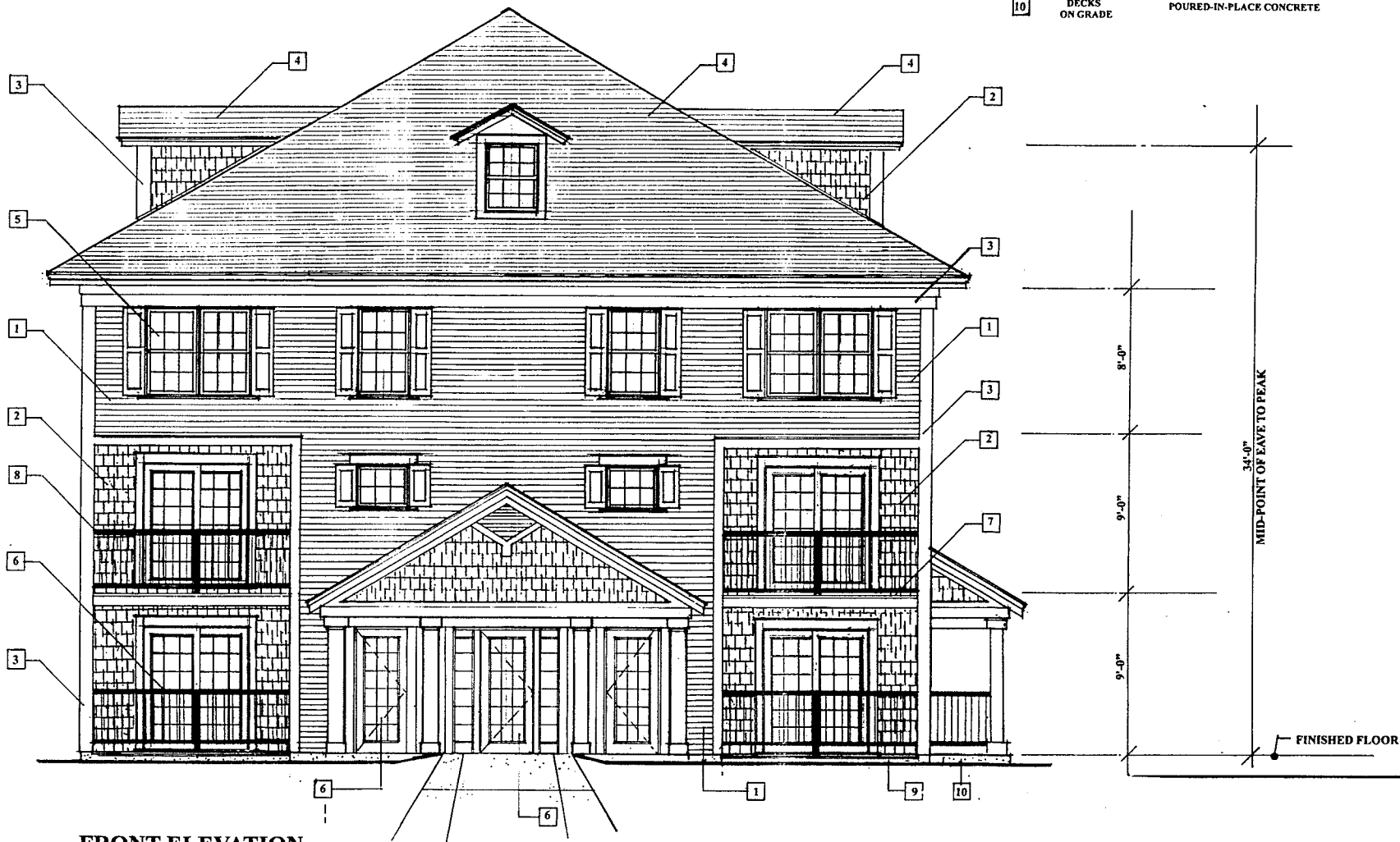
GUARDRAIL SYSTEM.
COLOR AS SELECTED BY ARCHITECT.
- 9

FOUNDATIONS:

POURED-IN-PLACE CONCRETE
- 10

DECKS
ON GRADE

POURED-IN-PLACE CONCRETE



FRONT ELEVATION
1/4" = 1'-0"

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS
ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE
CONDITIONS PRIOR TO CONSTRUCTION.



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FAX: 860-249-1112

GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

DESCRIPTION OF EXTERIOR MATERIALS

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DECKS
ON GRADE

POURED-IN-PLACE CONCRETE



REAR ELEVATION
1/4" = 1'-0"

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MICHAEL DUGAN
REGISTERED ARCHITECT
STATE OF VERMONT
NO. 12345
1997

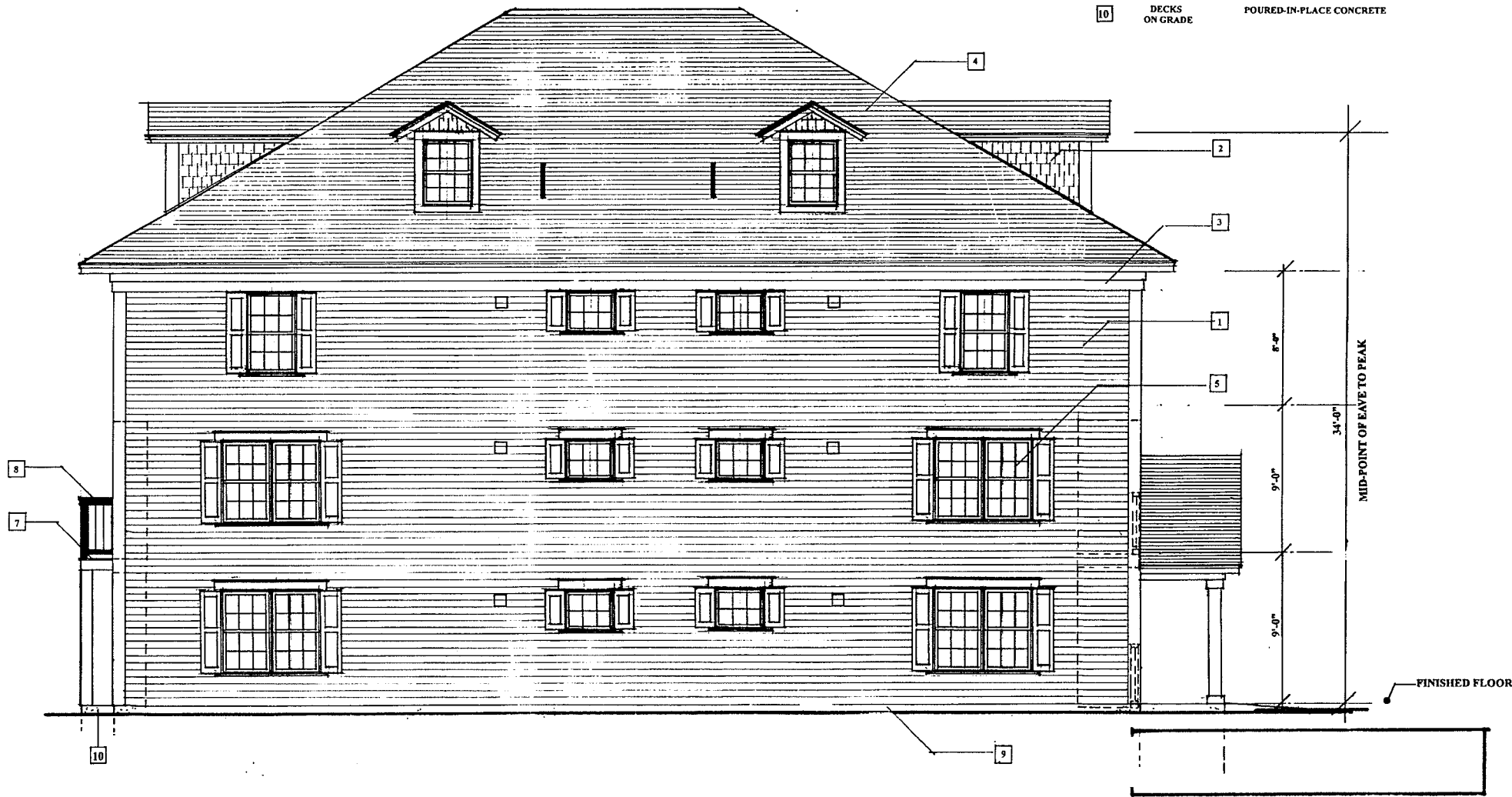
GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

REAR ELEVATION OF BUILDINGS
E, L, M AND N

CONSULTANT
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MICHAEL L. DUGAN ARCHITECT

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| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |



SIDE ELEVATION
1/4" = 1'-0"



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SIDE ELEVATION OF BUILDINGS
E, L, M AND N

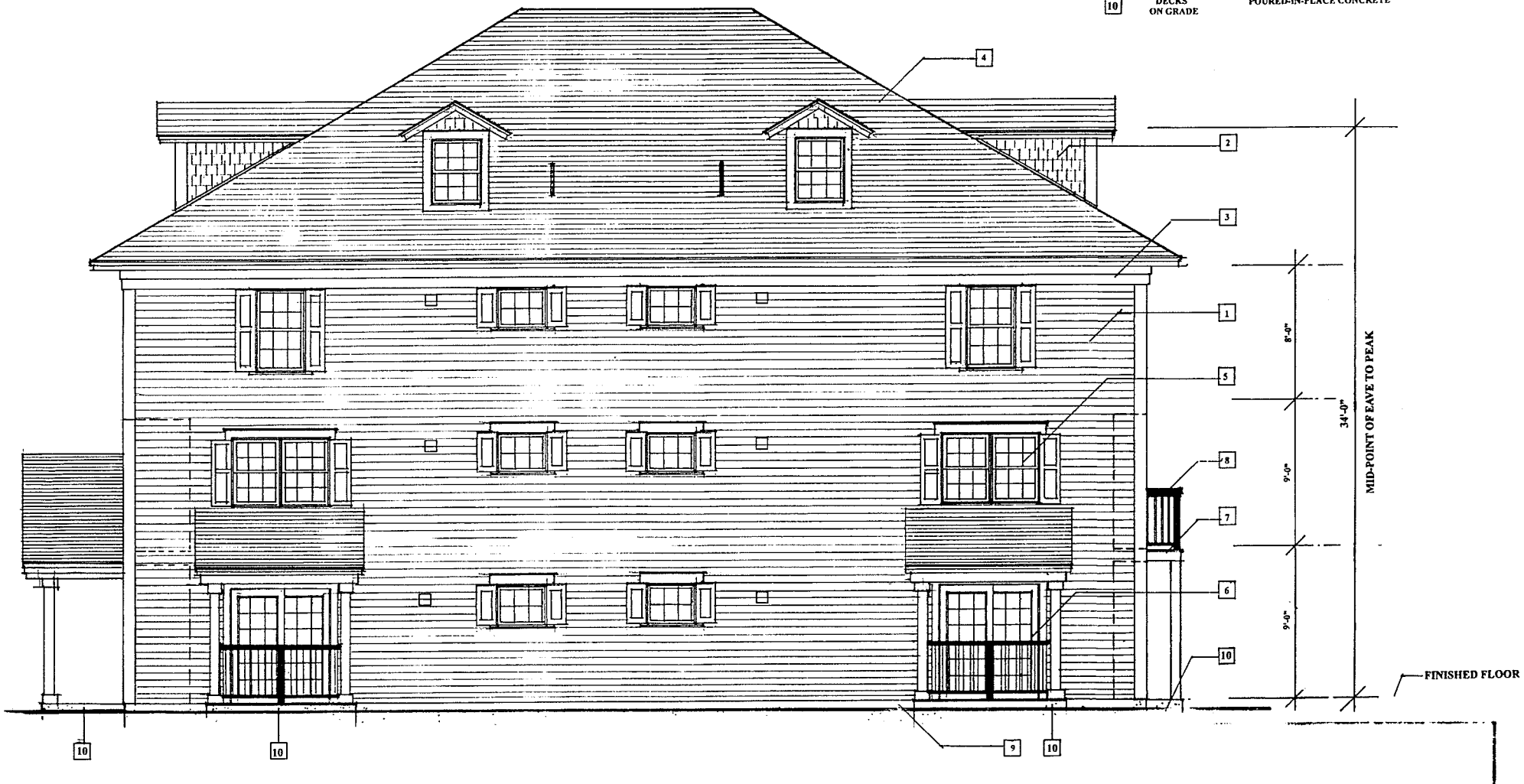


GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

DESCRIPTION OF EXTERIOR MATERIALS

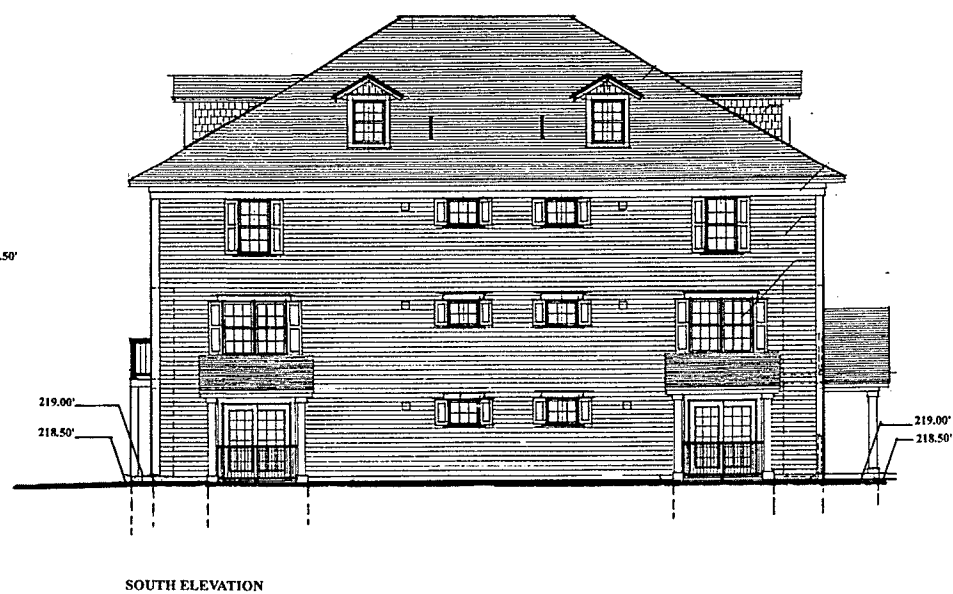
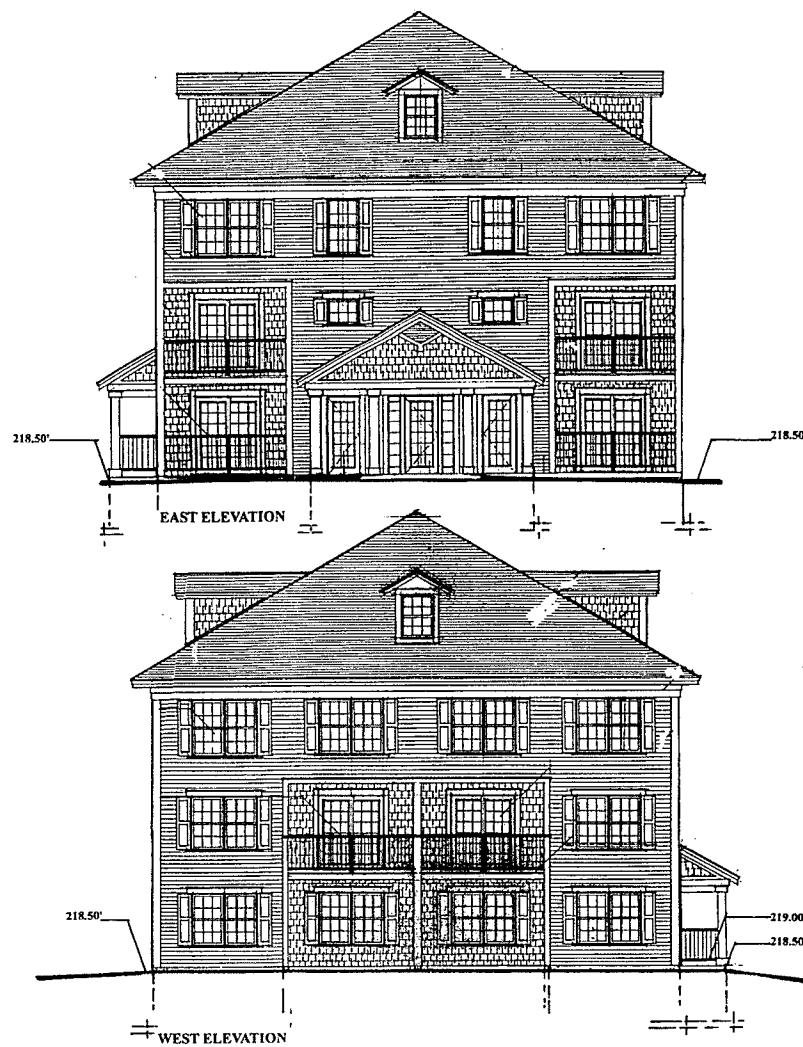
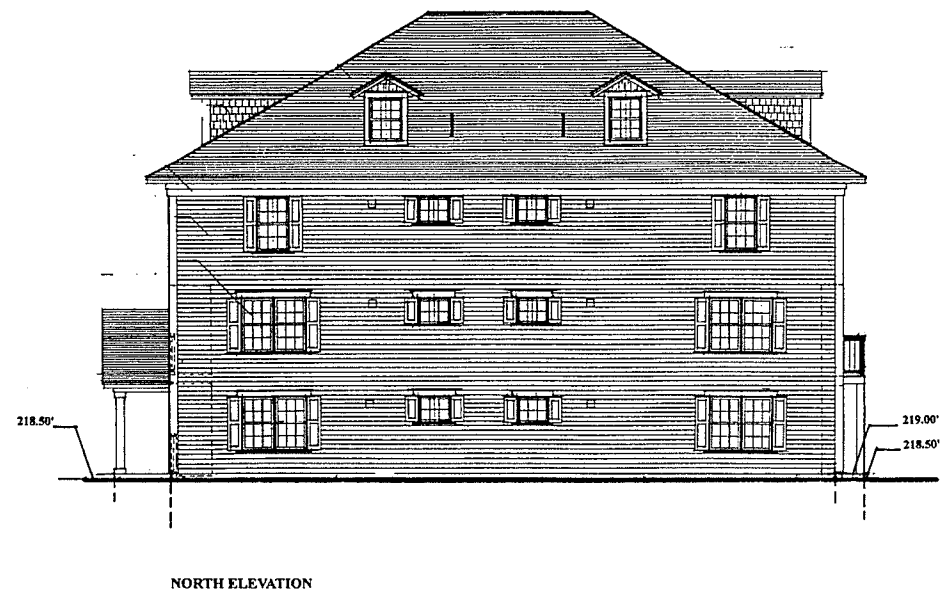
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- 8 PORCH RAILINGS: GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT.
- 9 FOUNDATIONS: POURED-IN-PLACE CONCRETE
- 10 DECKS ON GRADE POURED-IN-PLACE CONCRETE



SIDE ELEVATION
1/4" = 1'-0"

GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR CONSTRUCTION.





BUILDING E

FFE= 219.00'



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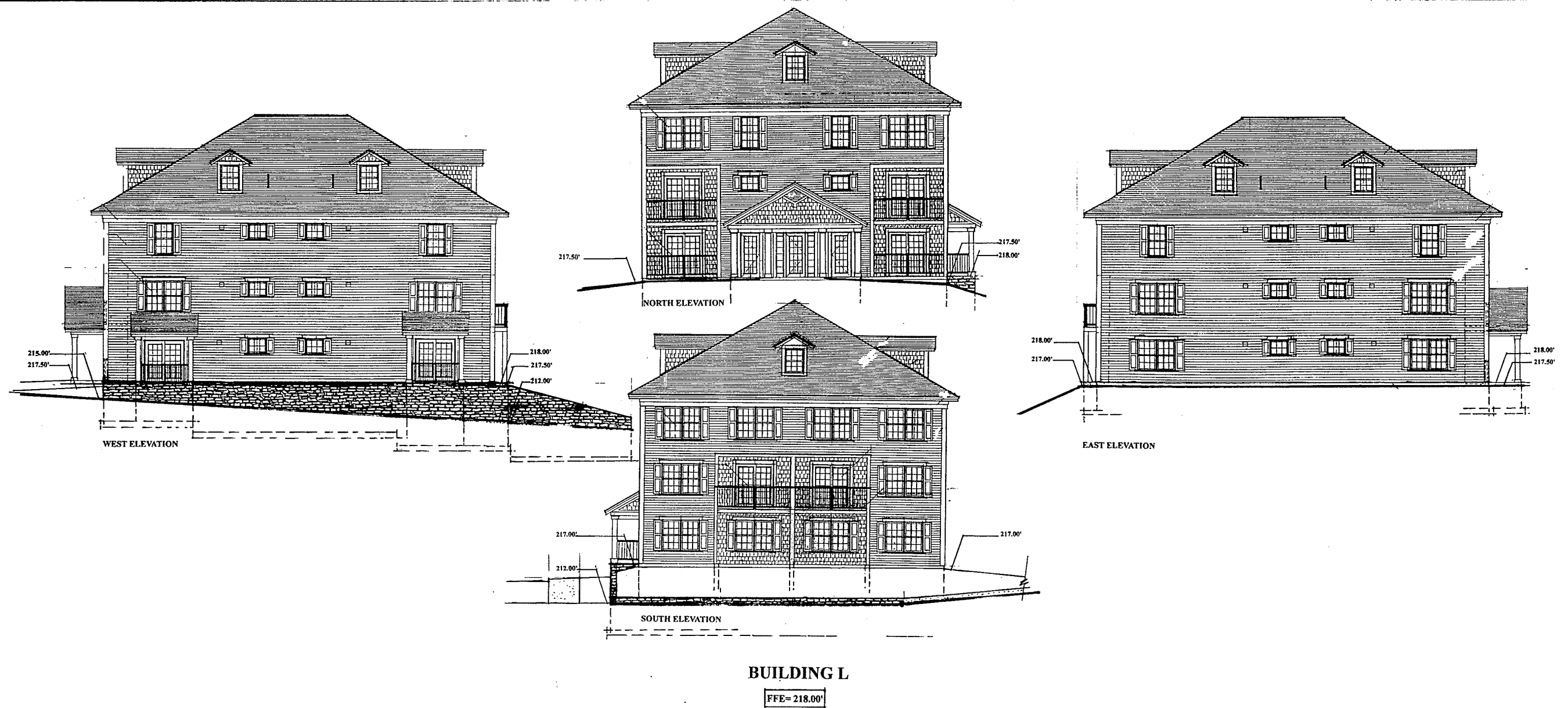
FINISHED GRADE ELEVATIONS
FOR
BUILDING E

MICHAEL DUGAN
VERMONT ARCHITECT
44 LAUREL STREET
BURLINGTON, VT 05401
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FAX: 860.244.1112

GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-2.4

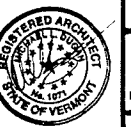


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FINISHED GRADE ELEVATIONS
FOR
BUILDING L

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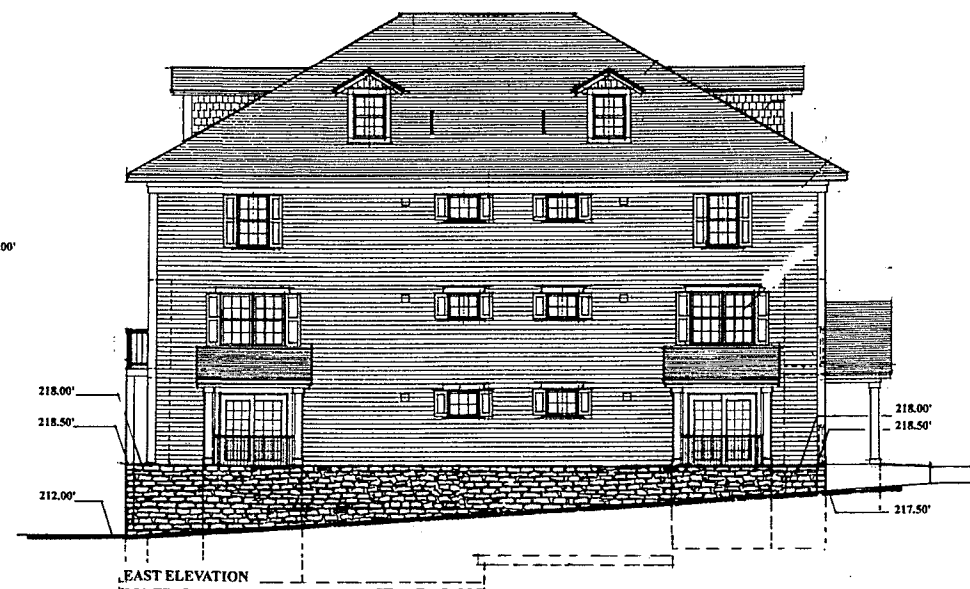
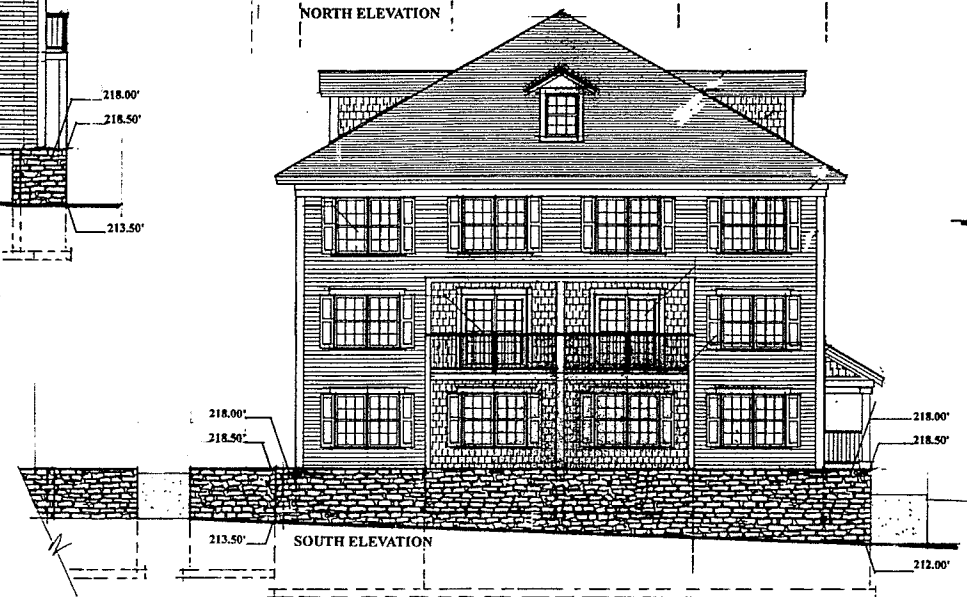
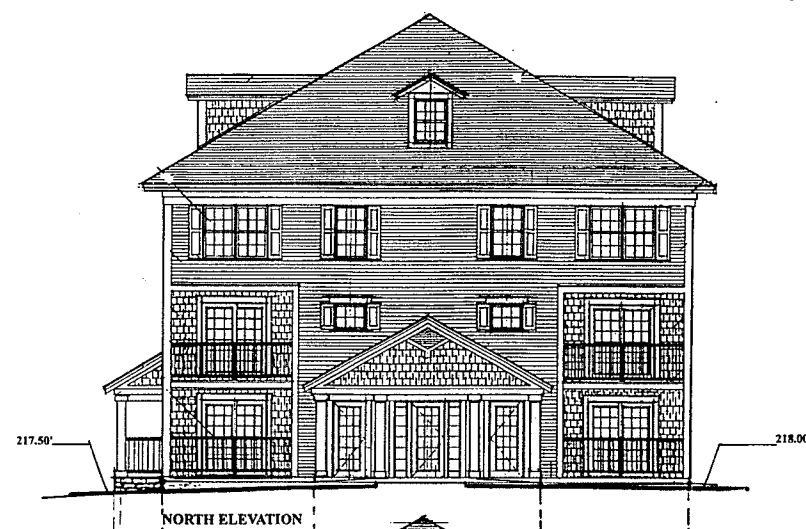
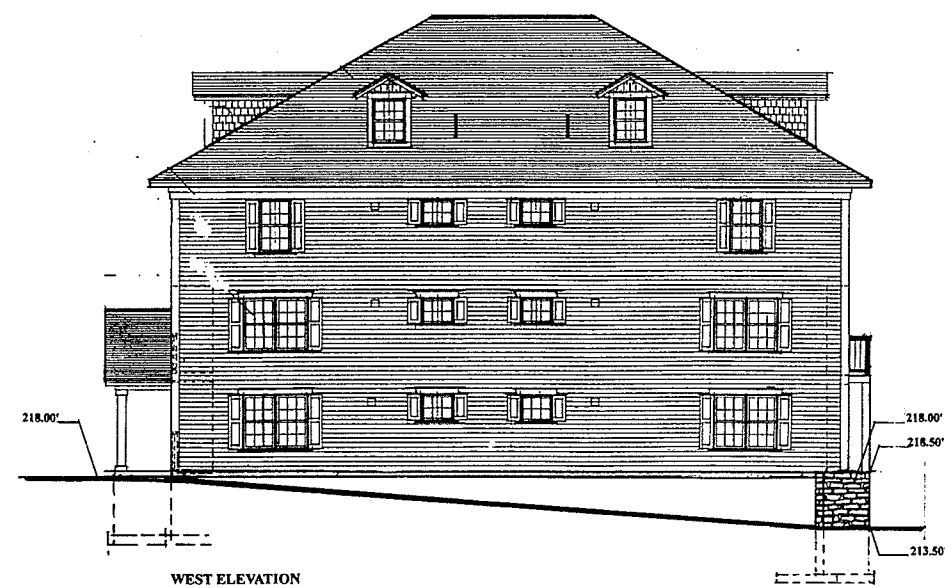
GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT



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GENERAL CONTRACTOR IS TO VERIFY ALL SITE

FEBRUARY 16, 2015

A-2.5



BUILDING M

FFE=218.50'

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GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

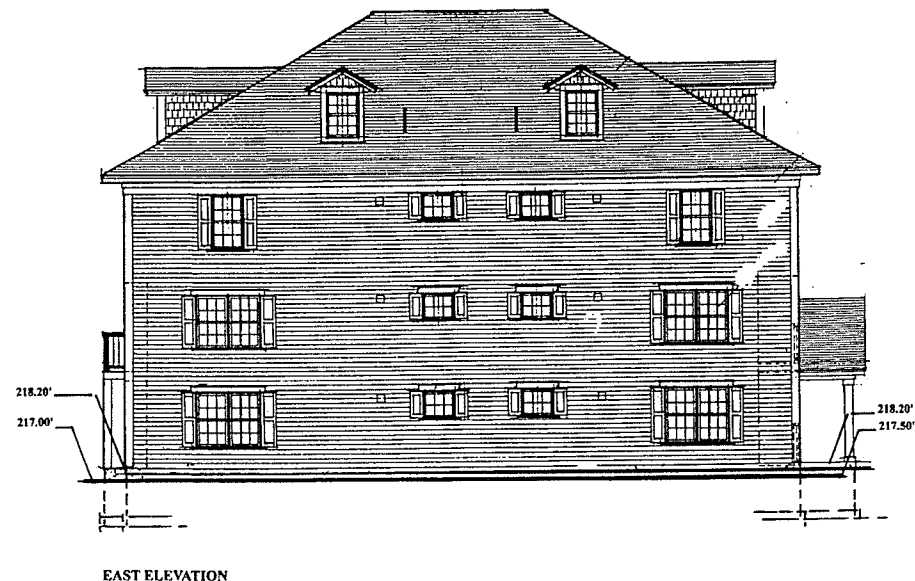
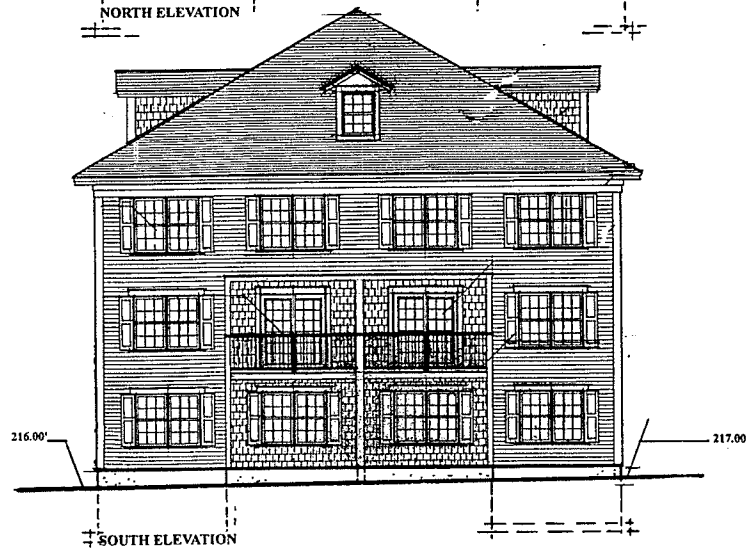
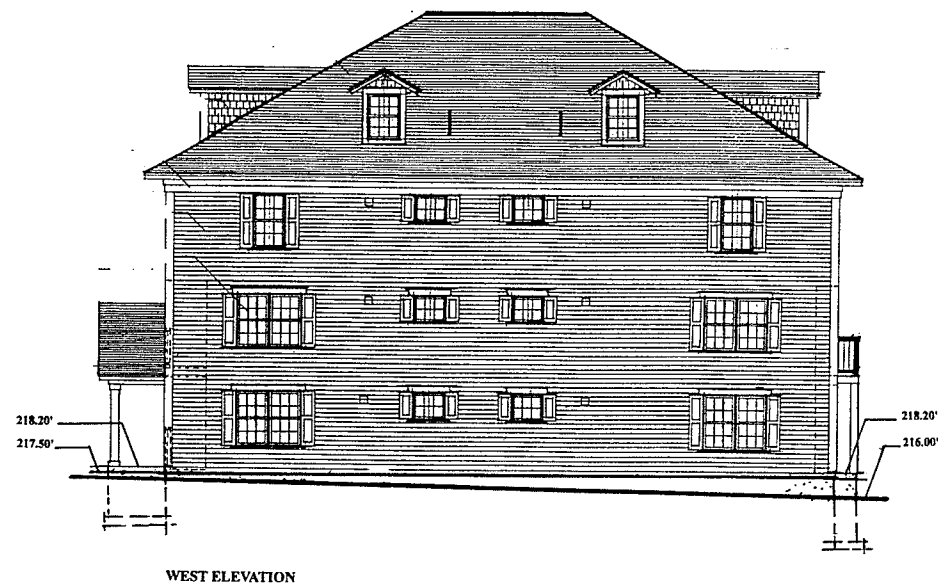
FEBRUARY 16, 2015

A-2.6

MICHAEL DUGAN
REGISTERED ARCHITECT
STATE OF VERMONT
NO. 1271

FINISHED GRADE ELEVATIONS
FOR BUILDING M

CONSENT
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BUILDING N

FFE= 218.20'



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FINISHED GRADE ELEVATIONS
FOR
BUILDING N

MICHAEL DUGAN
VERMONT REGISTERED ARCHITECT
100 STATE STREET
SUITE 200
BURLINGTON, VT 05401
PHONE: 802.255.1234
FAX: 802.255.1235
WWW.MICHAELDUGANARCHITECT.COM

GARDEN STREET APARTMENTS
6 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-2.

Brothers Corporation

To: Scott Gustin, Burlington Planning & Zoning
Burlington Development Review Board Member
From: Patrick O'Brien
Re: Project Narrative for Garden Street Apartments (formerly Grove Street Apartments).
Date: February 17, 2015

**DEPARTMENT OF
PLANNING & ZONING****Exhibit 3**

It has been almost a year since we received Preliminary approval for this project and since then we have been diligently working on all of the requested changes as well as obtaining all of the applicable state permits. I wanted to have as much of those in hand so all of their requests could be put on the plans as well. All too often I've received final approval from the municipality only to then have to change the plans and then apply due to a change requested by another permitting authority.

With that said, I would like to start with the 22 Conditions that were attached to our Preliminary Approval. Below, in chronological order are our responses to these requirements. The second part of this narrative explains the changes relating to these conditions in more detail.

1. This preliminary plat approval in no way grants or implies final plat approval. Final plat application shall be filed in accordance with Section 10.1.9, Final Plat Approval Process, of the CDO and per the Conditions of Approval. No response required.
2. Prior to final plat application, written acceptance of the proposed public traffic and pedestrian transportation improvements shall be obtained from the Dept. of Public Works. This will be coming directly from DPW. Written approval of the proposed public water and sewer service upgrades shall also be obtained from the Dept. of Public Works. This will be coming directly from DPW.
3. Prior to final plat application, written acceptance of the proposed improvements to Schmanska Park and its parking lot shall be obtained from the Dept. of Parks & Recreation. Completed, Exhibit # "6".
4. Prior to final plat application, written acceptance of the proposed street trees along Grove Street shall be obtained from the City Arborist. Completed, see Exhibit # "7".
5. Prior to final plat application, written acceptance of the single access drive and its sufficiency for emergency service vehicles shall be obtained from the Fire Marshal. Completed, see Exhibit # "8".
6. Prior to final plat application, a boundary survey by a VT licensed land surveyor shall be provided and shall show all proposed boundary adjustments. Completed, see sheets PL 1 & PL 2.
7. Prior to final plat application, the applicant shall contact the Vermont Division for Historic Preservation to inquire as to studies of the area that may indicate heightened archaeological significance. Completed, see Exhibit # "9".
8. Prior to final plat application, a revised project phasing schedule shall be provided that estimates what will be constructed and when it will be constructed. Completed, see Exhibit # "4". The phasing schedule shall be consistent with the inclusionary housing requirements of Sections 9.1.18 & 9.1.19 of the CDO. The inclusionary housing units are to be contained within a single building as presently proposed, the inclusionary housing units must be constructed first. Written acceptance of the proposed inclusionary housing shall be obtained from the city's Housing Trust Fund. The phasing schedule must also provide for the duplex housing units to be built early during the project construction. Please refer to my narrative for

additional information on inclusionary housing and design.

9. Prior to final plat application, the site plan shall be substantially revised to strengthen the interior streetscape and to provide for a more gradual transition between smaller buildings to the largest apartment buildings. Doing so may be as recommended in Sec. 6.2.2 (h) of these findings or otherwise. Completed, please see my narrative and attached plans for details.

10. Prior to final plat application, the applicant shall investigate providing a second access into the site to improve connectivity with the surrounding neighborhood. If feasible, the second access shall be depicted on final plat plans. The Investigation proved that second access would potentially improve vehicle and pedestrian connectivity to Grove Street, but would be unsafe due to minimal site distances (it would be located where there is a curve in the road) and would be counter intuitive to the environmental restoration work (culvert removal). See narrative for additional details.

11. Final plat plans shall depict mechanical equipment, "hot box," and outdoor mailbox details. Completed, see plan sheet PL 1-2 and attachment # (10).

12. Final plat plans shall contain consistent building labels between the elevation drawings and site plan. Elevation drawings in the final plat plans shall also include finished grade information on all building sides for all buildings proposed. Completed, see Architectural Plans and Final Grading Plan sheet L-2 and narrative for details. The final plat plans shall also include accurate perspective drawings. Completed, see Illustrations 1-4. The elevation drawings as presented at preliminary plat are not approvable. Completed, see Architectural Plans.

13. Final plat plans shall include a revised clubhouse building design with greater emphasis on perceived verticality. Completed, see sheet A-7.0

14. Final plat plans shall include installation details for the proposed exterior building materials. Completed, each architectural elevation includes installation details and specs.

15. Final plat plans shall depict a concrete public sidewalk across the access drive into the development. Completed.

16. Final plat plans shall include information relative to amenities (i.e. water access, tool sheds, etc.) for the community gardens. Completed, all formal amenities are depicted on the plans and described in the narrative.

17. Final plat plans shall address the feasibility of solar energy or hot water, or at least solar-ready construction, for the development. Due to the availability of Natural Gas, all other alternative energy methods are currently not cost beneficial. We are however constructing the buildings with sleeves at appropriate locations in the event that the benefit of solar roof top panels becomes financially beneficial in the future.

18. Final plat plans shall include fixture cut sheets and illumination levels for building entries shall be provided. Completed, see sheet 3.0 for illumination levels and attachment # 11 for cut sheets.

19. Final plat plans shall include written approval of the project stormwater management system and erosion prevention and sediment control plan from the Conservation Board and the Stormwater

Brothers Corporation**DEPARTMENT OF
PLANNING & ZONING**

Administrator. We have worked with the City's Stormwater Administrator to design a system that surpasses the current standards. The written approvals from her as well as the Conservation Board are pending and will be received prior to the DRB meeting.

20. The final plat plans shall include a parking management plan per Sec. 8.1.15 of the CDO for the requested parking waiver. Completed, see attachments 5 & 5A.

21. The existing 59' tall concrete structure immediately along Grove Street shall be retained and integrated into the project design. Details shall be provided in the final plat plans. See sheet A 10. Buildings on the lower (eastern) plateau of the property may utilize this structure for a height limit. Buildings on the upper (western) plateau shall not exceed the standard 35' height limit. See architectural elevations and grading plan details.

22. Prior to final plat approval, Conservation Board shall review the project under Sections 4.5.4 (c) and (d) – riparian and wetland overlay zones. We agree.

As you will see from the plan set, we have made several modifications to the project and other improvements not only due to the above conditions, but also due to various requests by department heads (and staff), our neighbors and other permitting authorities. There are also market driven design changes made by us and our consultants. We feel that all of these changes both enhance the project and further its projects conformance to the BDO. Below is a description of the larger changes.

1. To further conform to the existing neighborhood along Grove Street, We have increased the number of smaller duplex and six plex buildings on the upper plateau 13. We have also reduced the size of the three larger buildings from three 33 unit buildings to a 21 unit, a 22 unit and a 33 unit. We also repositioned buildings and brought them more parallel with the street and sidewalks. We feel that these changes have resulted in a softer transition from the smaller duplexes along Grove Street to the larger buildings in the rest of the project while and at the same time strengthened the interior streetscape and pedestrian circulation within the project.

2. To conform to the 35' height restriction on the upper plateau, the finished grade on every side of each building is just a few inches below the finish floor elevation of each building. The exceptions to this rule include one end of the larger buildings where we enter the underground garages, which obviously has to be 10 feet below finish floor elevation. In order to conform to the 35' restriction, we placed all underground parking for these buildings fully below grade. The proposed buildings heights on the upper plateau are as follows: Duplex's = 26', six plex's = 34', 21 unit = 24', 22 unit = 34' and the 33 unit = 34'.

3. We lowered the overall density from 245 to 232 units. These units were previously within the upper plateau and the largest single reduction was accomplished by removing a story from Building I, which went from 33 units to 22 units once a story was removed.

4. We are proposing to renovate portions of the old plant to provide a formal lookout and pedestrian and cycling rest area. The lookout will include a pavilion with benches and will also include a memorial which will hold two plaques. One plaque will briefly describe industrial history of the site and the other will be a memorial to Stuart D. Ireland, the company's founder. The lookout will remain private because neither the Parks Department nor the Street Department wants to incur the cost to maintain the structure. The Parks Department did guide us in the planning of the pavilion. No buildings on the lower plateau will be higher

than this structure, which is a condition of our Preliminary Approval

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5. We have added a permanent sign in the island at the entrance. It will consist of black letters and placed on a concrete wall. No lighting for the sign is proposed.

6. We have added a larger and expandable community garden area and edible plantings around the project, which include an apple orchard as well as group plantings of black raspberry, raspberry and blueberry bushes.

7. We have designed a phasing plan that will conform to the 8th Condition of our Preliminary Approval. The phasing plan is designed to minimize the areas where construction traffic and resident traffic (vehicle and pedestrian) will co-exist. We will explain and show you in detail (at our DRB meetings) how this will work. Submitting the plan without being able to explain it would be too confusing, it needs to be explained. I have included a graphed timeline (exhibit 11-A) that depicts the phasing, and as you will see we are building the majority of the duplexes in the first 2 phases, which was part of this Condition. In regards to the inclusionary requirements, we will certainly meet them. We understand that if we place all of the inclusionary in 1 building, then that building shall be built first. We also understand that if we do not, then the inclusionary units shall be offered in the same timeline as the market rate units.

8. We have revised the design of the parking lot area for Syzmanska Park in conjunction with both Parks and Recreation and the Department of Public Works. The only area where the two departments do not agree on was if the sidewalk between the parking area and Grove Street. Parks and Recreation wants the sidewalk to be against the curb in the parking lot which will allow a wider green strip between the sidewalk and Grove Street. DPW wants the sidewalk to be in the middle of the green strip. We have shown what DPW wants. These details are shown on Sheet S-8

9. We have redesigned the Club House to give it a more vertical look. The clubhouse will include a rental office as well as the following amenities: Outdoor pool with sun deck, interior fitness room, complete kitchen, meeting room, lounge and library. Upstairs there will be another lounge area with a large screen TV (for viewing and electronic gaming) and an area that will house ping pong and pool tables.

10. We have included one story maintenance building that will have a small office and enough room for park maintenance equipment. We have also designed an area adjacent to this building to hold seasonal material for the grounds crew.

11. At the request of the DPW we relocated the pump station to the lowest level of the site and have included a large holding tank.

12. In conjunction with Burlington Electric Department, we have designed a non-traditional layout to the electrical system. Typically the distribution system and associated above ground boxes run parallel to the street and negatively affect both the function and aesthetics of the street scape. Our distribution for the main part is opposite that and runs behind the buildings. The electric layout is depicted on the Utility Plan (sheet S3) and the Easement Plat (Sheet EA2 of 2). The route is easier to follow on the latter plan.

13. We have reduced parking spaces to 397, but therefore need to request a parking waiver to allow us to have 16% less parking spaces than the 448 that are required. A Parking Management Narrative and Parking Management Plan are attached as exhibits 5 & 5A.

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14. At the request of the neighbors, we have agreed to the following items:
- A. We have agreed to shorten our Saturday work hours from 8am to 3pm.
 - B. We have agreed to add a row of 8 -10 foot high White Spruce and White Pine behind building "T" (see sheet L-2).
 - C. As mentioned, we have agreed to reduce the density by 11 units and at the same time reduce height of Building I by removing a complete story (see sheet A3A.0).
 - D. We have agreed to improve a second crossing on Grove Street, closer to the existing buildings. The improvements include Rectangular Rapid Flashing Beacons, a bump out and associated sign (see sheet S8).
 - E. We have also agreed to narrow the section of road from 34+/- feet 24 +/- feet from the r Syzmanska Parking lot down to the above mentioned bump out (see sheet S8).

All of these requests have been put on the plans, with the exception of item A.

Lastly, we are proposing four Boundary Line Adjustments all of which are depicted on the Boundary Plat

1. We are quit claiming .81 acres to the Merchant family. During the survey process, Mr. Merch disagreed with what our surveys had identified in the field and subsequently told me that when he purcha his land from Mr. Scott (the previous owner) that Mr. Scott told him that the lot went all the way Centennial Brook. Since then Mr. Merchant has assumed that he owned that area and has maintained it. even has a shed on it. We have not used that land, have no use for the land and did not count that land "developable" in our density calculations and we did not use it for lot coverage calculations so we feel best thing to do is simply quit any claim that we may have to the land by giving it to the Merchants. This v clear up an ambiguity about the property lines in the future. The Merchants are amenable to this and h signed the appropriate application. See sheet PL2-2 for details.

2. We are completing a Boundary Line Adjustment with the Manhke family. Currently, there i portion of their property that comes up onto the upper plateau of the Ireland Property. The Irelands did know this and have always used it. The design of the project always designed around this property line. Manhke's cannot access this property without crossing the stream and climbing the bank and we both that the best thing to do is to swap the 0.23 acres and square off the lot. This has not caused any redesign the project and we are not using it in our density or lot coverage calculations. The Manhke's are amenable this swap and have signed the appropriate application. See sheet PL1-2 for details.

3. We are proposing to complete a 0.69 acre boundary line with ourselves. As discussed at sketch preliminary. The .69 acres is currently part of what we call "Apple Grove" which is the small developm to the South of this project. Since sketch and preliminary we have used this area for density and lot cover calculations. See sheet PL1-2 for details.

4. We are very excited to say that we are proposing to donate 6.22 acres to the Winooski Valley P District as well as provide them an easement that will enable them to develop a trail system that would s at the Syzmanska Park parking lot and lead them to the parcel we are gifting them, which adjoins landloc



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property in South Burlington that they already own. This is all depicted on the proposed Plat PL1-1. WVPD is very excited about this. This land was not used in any of our density or lot coverage calculations. We are also proposing to grant them a trail easement from this parcel north along the edge of the river and then west to the Syzmanska Park parking lot. This will finally and permanently give them access to the previously landlocked parcel. See sheet PL1-2 for details.

Certainly there are other small changes that we have made that will be presented at the meeting. We have worked very hard to incorporate everyone's requirements and suggestions and I truly feel that this project will enhance the aesthetic, environmental and quality of life of the overall neighborhood and become a valuable addition to Burlington's housing stock.

Respectfully submitted;

Patrick O'Brien (on behalf of the entire S.D. Ireland family)

Brothers Corporation

February 17, 2015

Scott Gustin, Senior Planner
Dept. of Planning & Zoning
149 Church Street
Burlington, VT 05401

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RE: Final Plat Approval – Garden Street Apartments (formerly Grove Street Apartments)

Dear Scott,

Please consider this a formal request for Final Plat Review and Approval for the above mentioned project. Attached for your review and distribution are the following:

Exhibit #1 is the list of the project plans.

Exhibit #2 is a list of abutters.

Exhibit #3 is the Project Narrative.

Exhibit #4A is a phasing plan depicting the anticipated construction sequence of the buildings.

Exhibit #4B is a construction timeline in graph form of the anticipated construction sequence.

Exhibit #5A is a parking waiver request and associated narrative.

Exhibit #5B is the Parking Management Plan required for the parking waiver request.

Exhibit #5C is a Contingency Parking Plan, which is also requested as part of the waiver request.

Exhibit #'s 6, 7 & 8 are department emails (Fire, Parks & Rec, and Tree warden) relating to the Preliminary approval requirements of obtaining written "signoffs" from these departments prior to Final submission.

Exhibit #9 is an email from the Vermont Division for Historic Preservation relating to Preliminary Requirements.

Exhibit #10 is the detail for the exterior mailboxes.

Exhibit #11, the cut sheets for the exterior lighting.

Exhibit # 12, detail for Frost Proof Hydrant to be used for the community gardens.

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Exhibit #'s 13A & 13B, cross sections of our two types of the concrete retaining walls (Form Bins and Recon Block).

Exhibit #14 is a copy of agreement with CarShare Vermont.

Exhibit # 15 are the boundary line adjustment applications.

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Also enclosed is a completed application and a check in the amount of \$ \$33,649.80 and six full sets, one 11" x 17" full set and one disk of the plans, which include all of the required specifications and details and lastly a set of four 11" x 17" Illustrations taken from the 4 locations you, Mary and I spoke about. All illustrations are by Lincoln Brown Illustrations.

In regards to the 17 Preliminary Permit Conditions, I am happy to say that we have satisfied each one of them (where it was applicable) and have addressed each one of the conditions individually in the attached Narrative and or supporting documents and plans.

Thank you (and Mary) very much for your insight and help throughout this application process, it is better than needed and very much appreciated.


Patrick O'Brien

Exhibit 1

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Exhibit #1 is the list of plans submitted to the City of Burlington Planning and Zoning department as part of the Final Plat Review application for Garden Street Apartments.

Civil Sheets Prepared by O'Leary Burke Civil Associates:

- T1 – Title Sheet
- S1 – Existing Conditions Plan
- S2 – Site Plan
- S3 – Utility Plan
- S4 – Grading Plan
- S5 – Grove Street Pedestrian Improvement Plan I
- S6 – Grove Street Pedestrian Improvement Plan II
- S7 – Grove Street Pedestrian Improvement Plan III
- S8 – Burlington Parks & Rec Improvements
- S9 – Off- Site Water Line Extension
- S10 – Sewer Plan & Profile Upper Plateau
- S11 – Sewer Plan & Profile Transition
- S12 – Sewer Plan & Profile Lower Plateau
- S13 – Sewer Details
- S14 – Pump Station Details
- S15 – Parking Details
- S16 – Water Details
- S17 – Stormwater & Erosion Control Details
- EC1 – Erosion Control Pre-Construction Plan
- EC2 – Erosion Control Construction Plan
- EC3 – Erosion Control Construction Plan
- EC4 – Erosion Control Post-Construction Plan
- EC5 – Erosion Control Culvert Removal
- EC6 – Erosion Control Detail

Survey Sheets Prepared by O'Leary Burke Civil Associates:

- PL1-2 Boundary and Boundary Line Adjustment Plat
- PL2-2 Boundary and Boundary Line Adjustment Plat
- EA 1 OF 2 Easement Plat
- EA 2 OF 2 Easement Plat

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Landscaping Sheets Prepared by Wagner Hodgson Landscape Architects:

- L1.0 – Overall Landscape Site Plan
- L1.1 – Landscape Lighting Plan
- L1.2 – Overall Grading Plan
- L1.3 – Parking Lot Shade Study
- L2.0 – Tree Plan
- L2.1 – Enlarged Planting Plan Zone 1
- L2.2 – Enlarged Planting Plan Zone 2
- L2.3 – Enlarged Planting Plan Zone 3
- L2.4 – Enlarged Planting Plan Zone 4
- L2.5 – Enlarged Planting Plan Zone 5
- L2.6 – Enlarged Planting Plan Zone 6 + Schedules
- Site lighting layout by Swaney Lighting Associates, Inc.

Architectural sheets prepared by Michael Dugan, Architect:

- A1.0 BUILDINGS A,B,C,D,F,G,H O AND P Elevations
- A1.1 Buildings A, B, C & D Finish Grade Elevations.
- A1.2 Buildings F, G & H Finish Grade Elevations.
- A1.3 Buildings O & P Finish Grade Elevations.
- A2.0 Buildings E, L, M & N Front Elevations.
- A2.1 Buildings E, L, M & N Rear Elevations.
- A2.2 Buildings E, L, M & N Side Elevations.
- A2.3 Buildings E, L, M & N Side Elevations.
- A2.4 Building E, Finish Grade Elevations.
- A2.5 Building L, Finish Grade Elevations.
- A2.6 Building M, Finish Grade Elevations.
- A2.7 Building N, Finish Grade Elevations.
- A3.0 Building K, Front & Rear Elevations.
- A3.1 Building K, Garage Entry & On Grade Elevations.
- A3A.0 Building I, Front & Rear Elevations.
- A3A.1 Building I, Garage Entry & On Grade Elevations.
- A4.0 Building J, Front & Rear Elevations.
- A4.1 Building J, Garage Entry & On Grade Elevations.
- A5.0 Building S, Front & Rear Elevations.
- A5.1 Building S, Garage Entry & On Grade Elevations.
- A5.2 Building T, Front & Rear Elevations.
- A5.3 Building T, Garage Entry & On Grade Elevations.
- A6.0 Building R, Front & Rear Elevations.

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- A6.1 Building R, Garage Entry & On Grade Elevations
- A7.0 Building U Finish Grade Elevations
- A8.0 Building Q, Finish Grade Elevations
- A9.0 Pavilion Plans and Elevations.
- A10.0 Overlook Plan and Elevations.
- A11.0 Dumpster and Retaining Wall Details

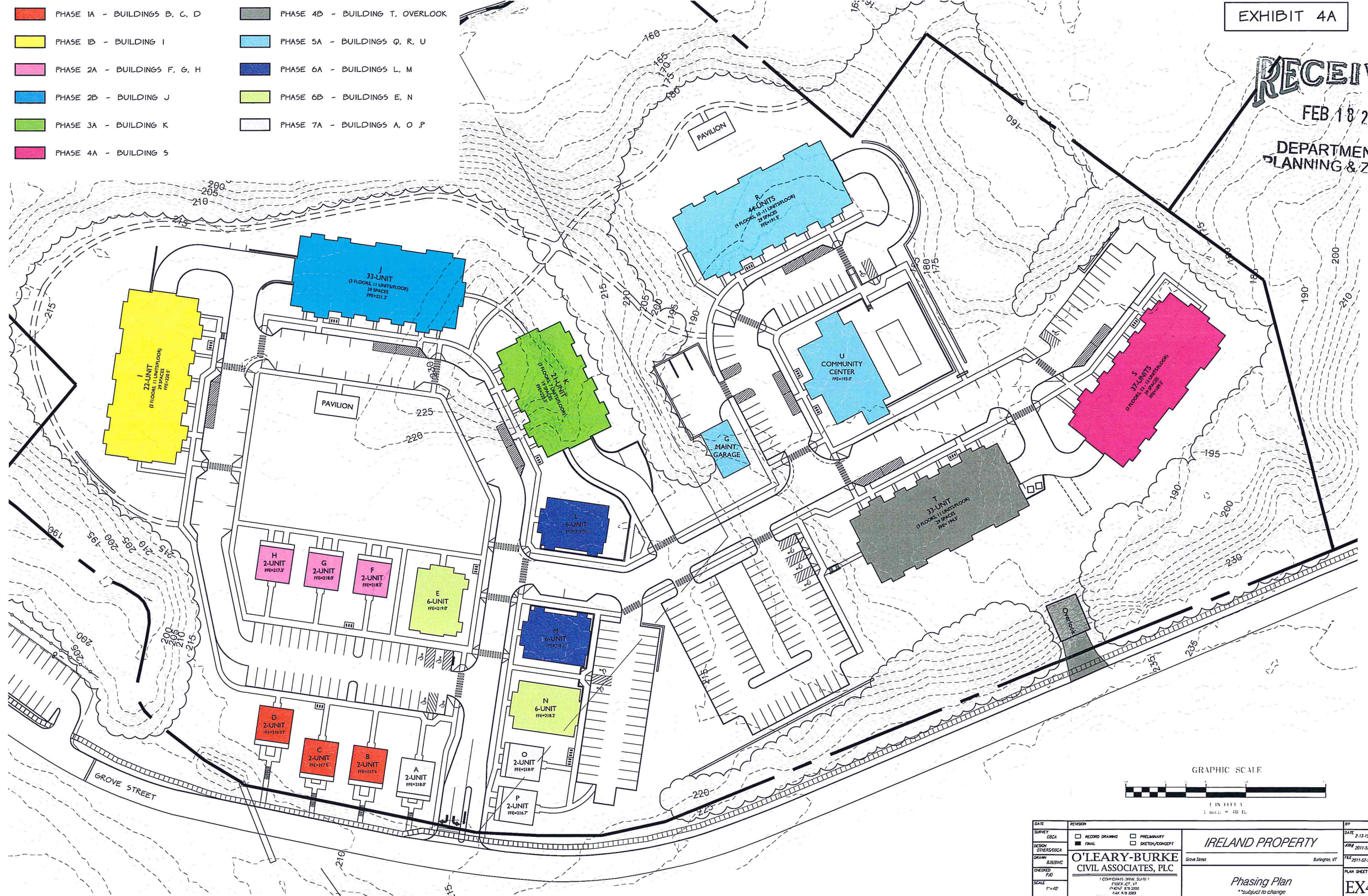
Illustrations prepared by Lincoln Brownell

- I-1, which is the view looking down Grove Street.
- I-2, which is the view looking up Grove Street.
- I-3, which is the view looking in from Grove Street.
- I-4, which is the view from Garden Street looking down Arbor Street.

Phasing

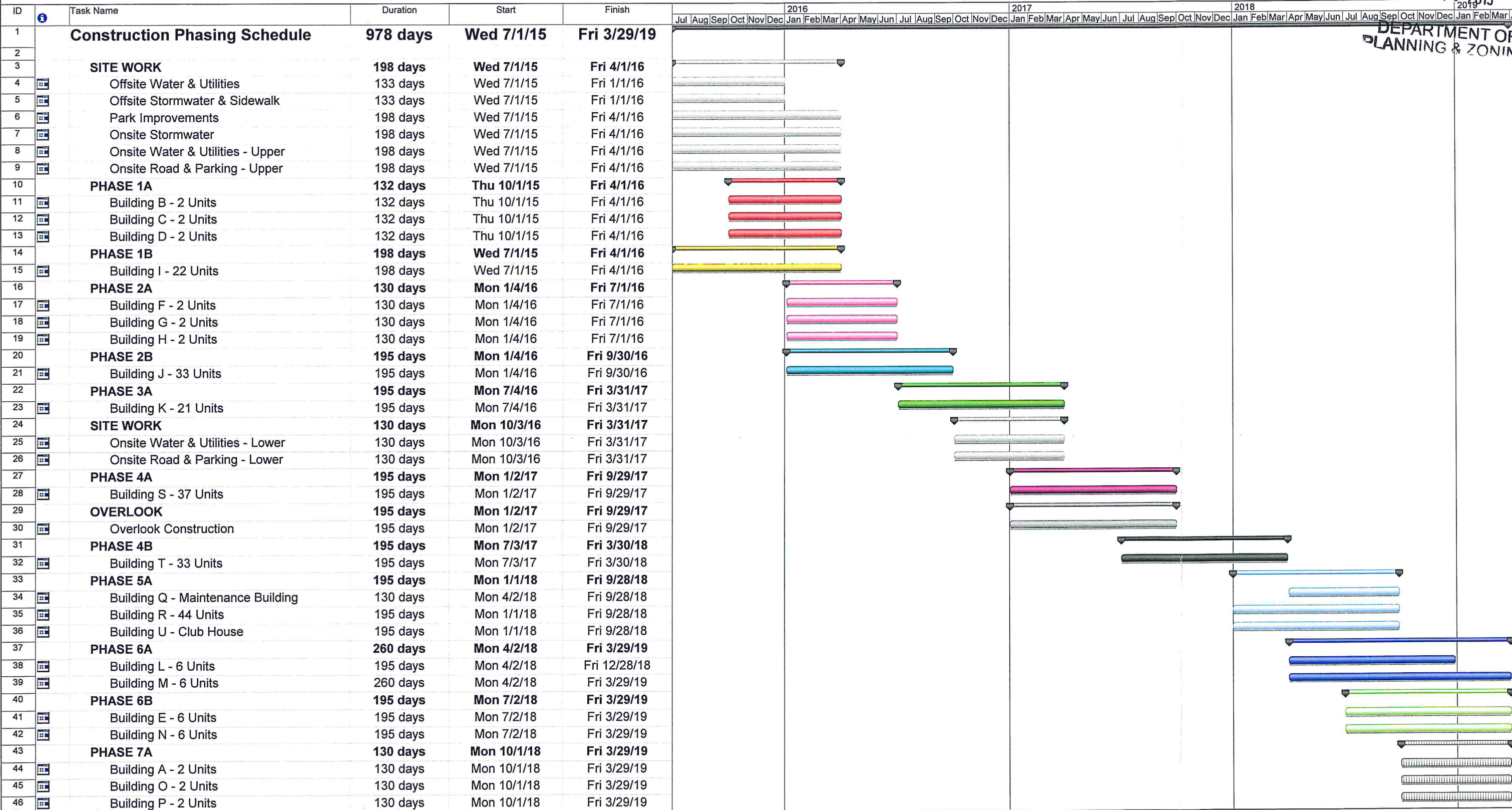
EXHIBIT 4A

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Garden Street Apartments
Anticipated Construction Phasing Schcedule
2-16-15

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* THIS IS AN ESTIMATED SCHEDULE
WHICH IS SUBJECT TO CHANGE

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Deadline

February 16, 2015

Burlington Development Review Board
City of Burlington, VT

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RE: Market Street Apartment Parking Waiver Request

Dear Board members,

Please consider this a formal request for a parking waiver to allow for an 18% reduction in the minimum parking standard. I offer the following information as well as two attachment's which are Exhibit's 5 B, the Parking Management Plan and 5 C, the Parking Contingency Plan .

I Project Summary: Market Street Apartments is a proposed 232 unit apartment complex consisting of 19 apartment buildings, a rental office/clubhouse and a maintenance building. If the waiver is granted the parking ratio will be 1.70+/- spaces per unit rather than the 2 spaces per unit required.

II Parking Requirements vs. Proposed Spaces: ^{Garden}Market Street Apartments is located within the Neighborhood Parking District. The required minimum off street parking requirements in this district are 2 spaces per dwelling unit for the apartments, and 2 per 1,000 square feet for the rental office. The calculation showing the required minimum amount of spaces, the number of proposed spaces and the difference is shown in the table below:

<u>Use</u>	<u># units or s.f.</u>	<u>Required spaces</u>	<u>Proposed spaces</u>	<u>Difference</u>
Apartment	232 units	464	394	70
Rental office	1,000 s.f.	2	0	2
Total		466	394	72

III Parking Management Plan Summary: ^{Garden}Market Street Apartments will have a mix of building sizes from two story duplex's to a 4 story 44 unit building. The six largest buildings all have underground parking garages which will hold a total of 164 of the 394 total parking spaces (41%). The Parking in the garage will be fee based and therefore assigned. The remaining 230 surface spaces will be on a first come / first serve basis. Resident parking stickers will be mandatory and guest parking their car for more than one night will be required to register their car at the on-site rental office. A maximum number of nights will be allowed for overnight guest parking. Violators will be towed. These requirements will be thoroughly explained to all rental applicants and will all be set as terms in every rental/lease agreement.

IV Parking demand analysis: For our demand analysis we first looked to see if we would be targeting any specific market wherein the parking ratio would be extremely low or high. We concluded that we would not be. We then considered the number of bedrooms compared to the number of parking places. Please refer to the table below for unit types, which indicate that if the parking waiver is granted, there will still be 62 more parking spaces than bedrooms, which is adequate for guests and rental office employees. We then reviewed what other apartment developers were using for parking ratios both locally and nationally and found that there is a range of zero spaces per unit for large inner city projects to a high of 2.5 spaces per unit in suburban areas where there is virtually zero walkability/bike-ability to services, jobs, retail or public transportation. Our research indicates that our proposal for 1.70 +/- spaces per unit is slightly above the national average for new apartment buildings. Due to the fact that most spaces will be available during working hours, we have concluded that allocating additional parking for the rental office employees is not necessary.

<u>Unit type</u>	<u>Unit count</u>	<u>Total bedroom by unit type</u>
2 BR	77	154
1 BR	138	138
Efficiency	17	17
Total	232	309

In determining our demand, we also considered other parking demand adjustment factors. They are as follows:

<u>Factor</u>	<u>Description</u>	<u>Adjustment</u>
Geographic Location	Adjacent to city core	down
Location to Employment	Less than 1 mile	down
Location to Recreation	Less than 300 feet	down
Location to retail/shops/services	Less than 1 mile	down
Location of Public Transit	Less than ½ mile	down
Location of school bus stop	Less than 1/3 mile	down
Quality of walkability	lighted sidewalks/crosswalks etc.	down
Housing tenure	Rental, not owner occupied	down
On site Management	Mandatory permits, active enforcement	down
Bicycle Storage	Exceeds requirements	down
Unit types	66% one bedroom or efficiency	down
CARSHARE POD	On – site	down
Ability to expand parking areas	Yes	down
Potential of Trans. Mngt. Assoc.	Yes via CATMA	down

Exhibit 5 A

(V) Conformance with the CDO and MDP: Both the CDO and MDP encourage the thoughtful management of parking areas and the integration of strategies that foster the use of alternative methods of commuting. To that end, we feel that the planning and design of this project, inclusive of the Parking Management Plan and proposed off site pedestrian improvements meets the intent of Articles 8 of the CDO as well as Section V of the MDP, and therefore feel that this waiver should be granted.

(VI) CONTINGENCY PLAN: In the event that additional parking is necessary there is ample room to add additional parking by adding pavement to the perimeter of the green around Garden Street. See attachment plan. This would be done by adding 9' of pavement around the perimeter and rotating the spaces 90 degrees to make them standard perpendicular parking spaces. This would add a total of 26 spaces. In the event that the board feels that this change should take place now, we would be happy to make the change as a condition of approval. We would rather build the parking this way but acknowledge that at Preliminary we proposed all of the "on-street" parking as perpendicular and the general consensus of staff and the board was that took away from the interior streetscape.

The increase in parking will add 4,655 SF of impervious coverage to the site. This will not have an effect on the stormwater design as we over designed the system with an additional 10,000 SF of impervious coverage that is not currently being built. The lot coverage for the site will increase from 42.8% to 43.3% (net increase of 0.5%). We would have to move the existing pavilion and gardens back a couple of feet, away from the street in order to fit the 5' sidewalk.

In the event that you do agree to allow us to adopt attachment " 5 C" as a condition of approval it would increase the parking ratio to 1.82 spaces per unit which means that a waiver would still need to be granted.

Lastly, I am happy to report that Garden Street will have an on-site CarShare Vermont parking pod.

Thank you very much for considering this waiver.

Patrick O'Brien

GARDEN STREET APARTMENTS PARKING MANAGEMENT PLAN

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1.0 INTRODUCTION

- 1.1 Purpose: Garden Street Apartments (GSA) has developed this Parking Management Plan (PMP) to control and manage parking at Garden Street Apartments to ensure the safe and efficient utilization of parking spaces for residents, visitors and guests.
- 1.2 Applicability: This plan is applicable to all GSA residents and employees and their guests and invitees.
- 1.3 Definitions:
 - 1.3.1 *Covered Parking* is defined as all parking spaces that are within the garages at GSA.
 - 1.3.2 *Above Ground Parking* is defined as all parking at GSA that is not defined as Covered Parking.
 - 1.3.3 *Resident* is defined as each person that has signed a formal lease agreement with GSA.
 - 1.3.4 *Employee* is defined as each person that is employed by GSA.
 - 1.3.5 *Guest or Invitee* is defined as a person who occupies a parking place for a period of less than 8 hours in a 7 day period.
 - 1.3.6 *Long Term Guest or Invitee* is defined as a person who occupies a parking place for more than 8 hours in a 7 day period.
- 1.4 Timeframe: Parking restrictions are in effect 24 hours a day & 365 days a year.

2.0 GSA Parking Philosophy

- 2.1 GSA offers one parking space to each Resident (who signed the lease) on a first come first serve basis.

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3.0 PARKING PERMIT: APPLICATION, TYPE AND DURATION

- 3.1 Application for a permit: All permits and passes are applied for and made available at the GSA rental office Monday through Friday from 8:30 a.m. to 5:00 p.m. and on Saturday from 8:30 a.m. to 12:30 P.M.
- 3.2 Covered Parking: There is a monthly charge for Covered Parking. Covered Parking stickers specify which space is allocated to a particular vehicle.
- 3.3 Above Ground Parking: Above Ground Parking Stickers are free and will not specify a particular space.
- 3.4 Guest / Visitor parking: Parking for a period of 8 hours or less per week in the Above Ground Parking area is allowed without the need for a parking pass. Guests & Visitors that are parking a vehicle for longer than 8 hours in a week shall be required to obtain a Short Term Parking Pass from the rental office.
- 3.5 Temporary parking permits: Temporary parking permits are available for residents who have a parking sticker issued but must utilize a rental car or temporary vehicle for a short time.
- 3.6 Number of Permits Issued: Residents will be given the opportunity to apply for a parking pass at the time the lease is executed. One permit may be issued to each person signing the lease. Parking passes are active for a period of 1 year from the date of issuance but will expire immediately upon termination of the lease. Only one type of parking permit may be issued at a time. Each vehicle must have its own permit and permits may not be transferred between vehicles.
- 3.7 Motorcycles, scooters, mopeds etc.: All registered vehicles, including motorcycles, scooters, mopeds etc. must have a valid parking permit to park at GSA.

- 3.8 Electric Vehicles: Electric Vehicle's charging stations will be made available upon requested. The resident will be charged a pro-rated fee based on time used. Once installed, application to park in the charging station shall be made at the GSA rental office.

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4.0 NEW OR REPLACEMENT PARKING PERMITS

- 4.1 New Vehicles: New vehicles replacing existing vehicles are required to apply for a new parking permit within 24 hours.
- 4.2 Replacement Permits: Lost/stolen or damaged permit reports will have to be completed at the GSA rental office to obtain a replacement permit. If a permit is lost before being attached to the vehicle for which it was issued, a \$__ fee may be assessed. If a permit is found to be removed from a vehicle to which it had been issued, either by natural cause or stolen, the driver of the vehicle has 24 hours from the time it is found to be missing, to apply for and obtain a new permit.

5.0 DISPLAY OF PARKING PERMITS

Parking permits shall be affixed to the upper left corner of the rear window of the vehicle so that the permit number is clearly visible from the outside of the vehicle. Vehicles without a rear window or a convertible will place the permit on the lower outside corner of the driver's side windshield so it can be seen and read from the outside of the vehicle. A citation will be issued to any vehicle where the parking permit is not displayed in the designated area on the vehicle window. A citation is not subject to appeal if the parking permit is covered or blocked from view in any manner where it is not visible for any reason other than it was blocked by snow or ice. Citations due to placing the sticker in the wrong location on the vehicle may be appealed and the

citation may be dismissed if the driver shows the permit has been relocated to the correct location.

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6.0 MISUSE / FRAUD

Misuse of, fraudulent obtaining of, or unauthorized reproduction of a GSA parking permit is prohibited and may result in the immediate loss of GSA parking privileges.

7.0 ABANDONED VEHICLES

Any vehicle that has an expired inspection sticker, expired registration sticker or is inoperative for more than 20 calendar days will be deemed abandon and subject to tow, even if it has a valid GSA parking permit.

8.0 VEHICLE MAINTENANCE AND WASHING

There shall be no vehicle maintenance performed or vehicles washed on GSA property.

9.0 PARKING ENFORCEMENT

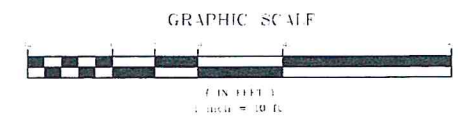
The employees of GSA have been authorized to administer and enforce the GSA Parking Management Plan on GSA property and to issue citations for violations of the plan. GSA and their employees may also conduct a search through the Vermont Department of Motor Vehicles (DMV) in order to obtain registered owner information in order to determine if the vehicle is owned by the applicant.

Parking citations not paid or appealed within 10 days of the issuance of the citation are subject to an administrative fee in addition to the citation fee.

EXHIBIT 5 B

Appeals need to be received within 10 days in order to be accepted for review.

All citations shall be mailed to the owners address. Unpaid citations may be taken from the residents' security deposit as outlined in the lease agreement.



Parking

UNITS	232
PROPOSED PARKING SPACES	394
UNDERGROUND	164
ABOVEGROUND	230
ADDITIONAL PARKING	
ABOVEGROUND	26
TOTAL POSSIBLE PARKING SPACES	420
UNDERGROUND	164
ABOVEGROUND	256
HANDICAP SPACES	17
UNDERGROUND	6
ABOVEGROUND	11



DATE	REVISION	BY
SURVEY OSCA	☐ RECORD DRAWING ☐ PRELIMINARY	DATE 2-10-15
DESIGN OTHERS/OSCA	☐ FINAL ☐ SKETCH/CONCEPT	JOB 2011-52
DRAWN BJS/BWC	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	FILE 2011-52-59
CHECKED PAJ		PLAN SHEET #
SCALE 1"=10'	1" CONVICTION (3000' SCALE) 1"=100' (10' SCALE) 1"=100' (10' SCALE)	5C

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MAR 05 2015

Memorandum of Understanding

This Memorandum of Understanding is dated as of 1/14, 2015, between S.D. Ireland Brothers Corp and Ireland Grove Street Properties LLC (SDI) and Green Mountain CarShare, Inc. (dba CarShare Vermont).

SDI has interest in providing access to CarShare Vermont's car-sharing service at an apartment complex that they are currently permitting at a location commonly and currently known as 140 Grove Street (herein referred to as the Property). SDI desires to provide future tenants at the Property and non-tenant members of CarShare Vermont with transportation alternatives to privately-owned motor vehicles and has discussed with CarShare Vermont the feasibility of locating one (1) CarShare Vermont-owned vehicle in a surface parking area on the Property, and CarShare Vermont has expressed a willingness to provide such vehicle and service to the tenants of the Property and non-tenant members of CarShare Vermont.

RECITALS

Property Description:

140 Grove Street
Burlington, VT 05401

Parking Rights:

SDI shall provide CarShare Vermont the use of one (1) parking space in a designated parking area on the Property. Parking space shall be independently accessible. The exact location of the space will be determined in the Parking License Agreement. CarShare Vermont members shall have unlimited access to such parking space 24 hours a day, unless otherwise agreed by CarShare Vermont and SDI.

Term of Agreement ("Term"):

Twelve (12) months, commencing one month after the 75th apartment unit is occupied and CarShare Vermont is notified of its occupation, or sooner if the parties mutually agree. Extension agreements to be determined in the Parking License Agreement.

Compensation:

The CarShare Vermont space shall be provided by SDI at no cost to CarShare Vermont for the entire Term, including any options to extend.

SDI shall also underwrite the cost of operating the CarShare Vermont vehicle at a rate ranging from \$0 to \$1,600 per month, depending upon the revenue generated by the vehicle each month (revenue includes hours and miles).

Pod Installation:

CarShare Vermont shall cover the cost of CarShare Vermont's pod installation.

Use:

The CarShare Vermont space shall be used for parking of a CarShare Vermont vehicle and the general operational needs of CarShare Vermont, including providing access for maintenance and cleaning of the vehicle. CarShare Vermont has the exclusive right but not the obligation to occupy the CarShare Vermont space.

Insurance:

For the length of the Term of this Agreement, CarShare Vermont shall maintain a policy of commercial general liability insurance and auto liability insurance against liability arising out of the use or maintenance of the CarShare Vermont space, or resulting from damage caused by CarShare Vermont members' operation of CarShare Vermont vehicles located at the Property. Said insurance shall be in the amount of Two Million Dollars (\$2,000,000.00) in the event of personal injury to any number of persons or of damage to property arising out of any one occurrence and annual aggregate. All of such insurance shall be primary with any insurance that may be carried by the Property Owner. Property Owner will not be held responsible for damage to CarShare Vermont's owned or leased vehicles while they are on Property premises except for negligent acts on the part of the Property Owner. Property Owner and its contractors will not assume any liability for CarShare Vermont's operation.

Signage:

Property Owner shall provide a suitable location for CarShare Vermont signage indicating to CarShare Vermont members and tenants the location of the CarShare Vermont space. Signage type, size, style, and location shall be consistent with CarShare Vermont's existing pod graphic standards, subject to Property Owner's reasonable approval and the City of Burlington sign ordinance. Exact location will be determined in the Parking License Agreement.

Service of Space(s)

CarShare Vermont shall be responsible for general upkeep of the CarShare Vermont space, including snow removal. If Property Owner plows the parking area occupied by CarShare Vermont's space, Property Owner shall do its due diligence to remove snow around the CarShare Vermont vehicle.

Enforcement

Property Owner shall authorize CarShare Vermont to tow any vehicle parked in the CarShare Vermont assigned parking space.

Marketing to Tenants

Property Owner shall use its reasonable efforts to provide CarShare Vermont marketing materials to all tenants during initial lease-up of the project and upon each new occupancy. CarShare Vermont shall provide marketing materials to the Property Owner; Property Owner shall make CarShare Vermont marketing materials available to tenants at no cost to CarShare Vermont.

Interruptions to Service:

SDI shall make a concerted effort to provide CarShare Vermont with reasonable advance notice about any known circumstances that may interrupt use of the CarShare Vermont space, such as parking obstructions, construction, and/or snow removal.

Assignment:

CarShare Vermont shall have exclusive right to use the CarShare Vermont space solely for car-sharing uses during the length of the term.

Termination:

Either party may terminate this Agreement with sixty (60) days advance written notice.

ACCEPTANCE:

This non-binding MOU reflects the terms and conditions upon which we are prepared to enter into an agreement at said Project. As such, it may be subject to Property Owner obtaining final entitlements from the City of Burlington, and the negotiation, execution, and delivery of a binding agreement and related documents. The terms and conditions herein are subject to change or withdrawal without notice.

THEREFORE, this MOU is dated as of the date set forth above.

S.D. Ireland Brothers Corp
& Ireland Grove Street Properties, LLC

By: _____

Name: _____

Title: _____

CarShare Vermont

By: _____

Name: _____

Title: _____

Patrick O'Brien

RECEIVED
FEB 18 2015

Subject:

FW: Grove Street

DEPARTMENT OF
PLANNING & ZONING
EXHIBIT # 6

From: Jesse Bridges [<mailto:jbridges@burlingtonvt.gov>]
Sent: Monday, November 24, 2014 9:06 PM
To: Patrick O'Brien; Warren Spinner; Deryk Roach; Jen Francis
Cc: Scott Gustin
Subject: RE: Grove Street

Patrick,

This email serves to notice the Department's acceptance of the proposed improvements to Schmanska Park's access as well as its parking lot.

We appreciate your communication and cooperation.

Best,
Jesse

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]
Sent: Friday, November 21, 2014 9:03 AM
To: Warren Spinner; Deryk Roach; Jesse Bridges; Jeanne Francis
Cc: Scott Gustin
Subject: FW: Grove Street

To all, the improvements you requested yesterday have been incorporated into the attached plan.

Thank you,

Patrick

From: Bryan Currier [<mailto:bcurrier@olearyburke.com>]
Sent: Friday, November 21, 2014 8:46 AM
To: Patrick O'Brien
Subject: RE: Grove Street

Good Morning Patrick,

Changes have been made, see attached.

Thanks,
Bryan

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]
Sent: Thursday, November 20, 2014 4:30 PM
To: Bryan Currier
Subject: FW: Grove Street

Bryan, please put these two changes on your list.

Thank you

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]
Sent: Thursday, November 20, 2014 4:00 PM
To: Patrick O'Brien
Cc: Jesse Bridges; Deryk Roach; Jen Francis; Scott Gustin
Subject: RE: Grove Street

Hi Patrick,

I have reviewed the adjusted landscape plans for the Grove St Apartments and Schamanska Park and Parking Lot. The adjustments for tree spacing, tree species and tree sizes are all correct on the plans so those have my approval.

Just want to confirm that the 4' 'Merchants' Metal fence has a break in it for our service road entrance into the park. Also the removable ballads need to be moved back behind the sidewalk in line with the fence. Those two corrections need to be shown on the plans.

If you need an approval for those corrections for P&Z please send it to Jen or Deryk. Please let us know if you have any questions.

Thanks, Warren

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]
Sent: Thursday, November 20, 2014 9:55 AM
To: Warren Spinner
Cc: Jesse Bridges
Subject: FW: Grove Street

Warren, it would be greatly appreciated if you could get your final letter out soon. I can not submit for final application without it.

Thank you very much.

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

From: Patrick O'Brien
Sent: Wednesday, October 01, 2014 1:42 PM
To: 'Warren Spinner'; Jesse Bridges; Deryk Roach
Cc: Bryan Carrier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: RE: Grove Street

Warren, as promised here are the revised sheets. I look forward to receiving a letter from you that will satisfy the DR condition.

Thank you,

Patrick

RECEIVED
FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]

Sent: Wednesday, October 01, 2014 10:04 AM

To: Patrick O'Brien; Jesse Bridges; Deryk Roach

Cc: Bryan Carrier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin

Subject: RE: Grove Street

Hi Patrick,

Thanks for sending these sheets along for our review and comment.

On sheet S8 'The park and parking lot', we will move/transplant the young tree that's currently in the way of the new proposed path. The one we planted this spring. The three trees proposed for the parking lot redesign shall be specified on the sheet/plans as: 2.5"-3" caliper B&B Acer freemanii 'Celebration'.

On the Grove Street Apartments 'Tree Plan', Bonnie you will need to modify the street tree placements as you enter new development from Grove Street. There needs to be a clear site vision for vehicles at this intersection of a minimum of 30 feet in both directions as you enter Grove street. So I would suggest the **first** tree to the south as you exit on to Grove St be removed from the plan as well as the first **two** going north as you exit. Totaling 3 'Princeton Elm's being removed from the plan. You now can readjust the remaining five Elm trees in that north section of greenbelt.

The trees to the south of the project that you are proposing to plant 'around' are Green Ash. Planning ahead for the Emerald Ash Borer arrival which in time will kill all the ash trees in our area. I would encourage you to remove the Ash trees now and plant the whole section with new elm trees. It makes sense to do this now so you don't end up with a fragmented section of greenbelt when these Ash trees die and need to be removed.

That's all I have for comments related to landscaping at this point. Please let me know if you have any questions based on my comments.

Best, Warren



Warren Spinner, Certified Arborist

City Arborist

Burlington Parks, Recreation & Waterfront

645 Pine Street

Burlington, VT 05401

802-862-8245



@BTVparks

From: Patrick O'Brien [mailto:pobrien@SDIRELAND.COM]
Sent: Tuesday, September 30, 2014 9:26 AM
To: Jesse Bridges; Deryk Roach; Warren Spinner
Cc: Bryan Currier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: Grove Street

RECEIVED
FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING

Hello everyone, as previously mentioned, condition # 3 of my Preliminary Approval states that *"Prior to final plat application, written acceptance of the proposed improvements to Schmanska Park and its parking lot shall be obtained from the Dept. of Parks & Recreation"*.

I have attached sheet S8 of our plan set for your review and comment.

Also, condition # 4 states that *"Prior to final plat application, written acceptance of the proposed street trees along Grove Street Shall be obtained from the City Arborist"*.

Warren, you will see from the plan that I will be forwarding you that we are proposing some Elm trees along the street. You will also notice that we are proposing to plant some between the existing trees south of the project. Please let us know how you feel about that.

I asked Bonnie Kirn at HKW to turn on the existing tree locations and I have not received that plan yet but I will forward it to you as soon as I get it, which will likely be at some point this morning, or she may send them directly to you.

It would be great if you could offer your comments to us via email so we can incorporate them into the plans and then get a revised set back to you so you can write your letters.

As always, a rapid response would be GREATLY appreciated.

Thank you all,

Patrick

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

Patrick O'Brien

Subject: FW: Grove Street

EXHIBIT # 7

From: Warren Spinner [mailto:WSpinner@burlingtonvt.gov]
Sent: Thursday, November 20, 2014 4:00 PM
To: Patrick O'Brien
Cc: Jesse Bridges; Deryk Roach; Jen Francis; Scott Gustin
Subject: RE: Grove Street

Hi Patrick,

I have reviewed the adjusted landscape plans for the Grove St Apartments and Schamanska Park and Parking Lot. The adjustments for tree spacing, tree species and tree sizes are all correct on the plans so those have my approval.

Just want to confirm that the 4' 'Merchants' Metal fence has a break in it for our service road entrance into the park. Also the removable ballads need to be moved back behind the sidewalk in line with the fence. Those two corrections need to be shown on the plans.

If you need an approval for those corrections for P&Z please send it to Jen or Deryk. Please let us know if you have any questions.

Thanks, Warren

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Sent: Thursday, November 20, 2014 9:55 AM
To: Warren Spinner
Cc: Jesse Bridges
Subject: FW: Grove Street

Warren, it would be greatly appreciated if you could get your final letter out soon. I can not submit for final application without it.

Thank you very much.

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

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To: 'Warren Spinner'; Jesse Bridges; Deryk Roach
Cc: Bryan Carrier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: RE: Grove Street

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

Warren, as promised here are the revised sheets. I look forward to receiving a letter from you that will satisfy the condition.

Thank you,

Patrick

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]
Sent: Wednesday, October 01, 2014 10:04 AM
To: Patrick O'Brien; Jesse Bridges; Deryk Roach
Cc: Bryan Carrier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: RE: Grove Street

Hi Patrick,

Thanks for sending these sheets along for our review and comment.

On sheet S8 'The park and parking lot', we will move/transplant the young tree that's currently in the way of the new proposed path. The one we planted this spring. The three trees proposed for the parking lot redesign shall be specified on the sheet/plans as: 2.5"-3" caliper B&B Acer freemanii 'Celebration'.

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The trees to the south of the project that you are proposing to plant 'around' are Green Ash. Planning ahead for the Emerald Ash Borer arrival which in time will kill all the ash trees in our area. I would encourage you to remove the Ash trees now and plant the whole section with new elm trees. It makes sense to do this now so you don't end up with a fragmented section of greenbelt when these Ash trees die and need to be removed.

That's all I have for comments related to landscaping at this point. Please let me know if you have any questions based on my comments.

Best, Warren



Warren Spinner, Certified Arborist
City Arborist
Burlington Parks, Recreation & Waterfront
645 Pine Street
Burlington, VT 05401
802-862-8245



@BTVparks

From: Patrick O'Brien [mailto:pobrien@SDIRELAND.COM]
Sent: Tuesday, September 30, 2014 9:26 AM
To: Jesse Bridges; Deryk Roach; Warren Spinner
Cc: Bryan Currier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: Grove Street

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

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I have attached sheet S8 of our plan set for your review and comment.

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Warren, you will see from the plan that I will be forwarding you that we are proposing some Elm trees along the street. You will also notice that we are proposing to plant some between the existing trees south of the project. Please let us know how you feel about that.

I asked Bonnie Kirn at HKW to turn on the existing tree locations and I have not received that plan yet but I will forward it to you as soon as I get it, which will likely be at some point this morning, or she may send them directly to you.

It would be great if you could offer your comments to us via email so we can incorporate them into the plans and then get a revised set back to you so you can write your letters.

As always, a rapid response would be GREATLY appreciated.

Thank you all,

Patrick

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
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Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

Burlington Fire Department
Office of the City Fire Marshal

132 North Avenue Burlington, Vermont 05401
Fire Alarm/Sprinkler/Plan Review Fax: (802) 658-7665
Inspection Services
(802) 864-5577

RECEIVED
EXHIBIT #
FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING
Public Information & Education
(802) 864-6911

14 November 2014

Mr. Scott Gustin, Project Manager
Department of Planning and Zoning
City of Burlington
149 Church Street
Burlington, VT 05401

RE: Final Plat Review – 100 Grove Street (S.D. Ireland property, Grove Street Apartments)

Mr. Gustin,

I have completed review of the site plan dated 23 July 2014 and prepared by O'Leary – Burke Civil Associates, PLC for this project. I have determined that the final project documents provided to this office by Patrick O'Brien of S.D. Ireland on 22 September 2014 to be an accurate representation of the requirements set forth by the Burlington Fire Department and Fire Marshal's Office as reviewed in the meeting dated 1 April 2014

The applicant has successfully addressed the following open issues:

1. This office reaffirms our electronic mail message to you dated 20 December 2013 stating that the designed single access/egress road width of 40 – 45 feet with divided lanes (at Grove Street), tapering to 28 feet and to 24 feet width meets emergency vehicle access requirements for this complex. This office recognizes earlier communication from the applicant that both travel lanes separated by the dividing curbing will meet or exceed minimum width requirements (20 feet as per NFPA 1) for fire department access roads.
2. The applicant advised this office in a letter dated 16 September 2014 that radio signal strength testing was completed by Burlington Communications, and was determined to meet the minimum requirements for mobile and hand – held fire department radios under existing conditions as required by BCO 13-63 through BCO 13-68. Additional radio signal strength testing shall be conducted by an approved technician on completion of building construction and, if required, modifications conducted to boost signal strength in the event that the minimum requirements of BCO 13-63 to 68 are not met at that time.
3. The applicant has re-designed the diagonal parking spaces adjacent to the larger residential structures. The current design includes parking spaces parallel to the travel lane (perpendicular to the structure(s)), improving access to these structures for fire department aerial apparatus.
4. The applicant has re-designed grading around structures previously shown as being excessively steep. The new grading plan will improve fire department ground ladder access should the need arise.

I have reviewed this final plat plan against the applicable requirements of Burlington Code of Ordinances Chapter 13, Vermont Fire and Building Safety Code (2012), and NFPA 1 (2012) pertaining to fire department site access, water supply, and fire protection system requirements and note that no additional modifications to this plan, beyond those documented, are required at this time based on the information provided by the applicant.

Please contact this office with any questions or comments pertaining to this review.

In Fire and Life Safety;

A handwritten signature in black ink, appearing to read "Barry J. Simays", written over a horizontal line.

Battalion Chief Barry J. Simays, CFI
Fire Marshal

cc: Patrick O'Brien, S.D. Ireland Corporation



Fax (802) 658-7665

Burlington Fire Department
Office of the City Fire Marshal

132 NORTH AVENUE • BURLINGTON, VERMONT 05401



(TTY) (802) 865-7142

Plan Review and Inspection Services: (802) 864-5577

Public Information and Education: (802) 864-6923

www.burlingtonvt.gov/fire

RECEIVED

26 March 2015

MAR 27 2015

DEPARTMENT OF
PLANNING & ZONING

Mr. Scott Gustin, Project Manager
Department of Planning and Zoning
City of Burlington
149 Church Street
Burlington, VT 05401

RE: Final Plat Review – 140 Grove Street (S.D. Ireland property, Grove Street Apartments): 15-0801PD

Mr. Gustin,

I have completed review of the final plat plan set dated 3 September 2014 and prepared by O'Leary – Burke Civil Associates, PLC for this project. This set of plans was stamped as received by the Department of Planning and Zoning on 18 February 2015 and provided to this office for review on 23 February 2015.

I have reviewed this final plat plan against the applicable requirements of Burlington Code of Ordinances Chapter 13, Vermont Fire and Building Safety Code (2012), and NFPA 1 (2012) pertaining to fire department site access, water supply, and fire protection system requirements and note that no additional modifications to this plan, beyond those documented below, are required at this time based on the information provided by the applicant.

Based on this full set of plans, the following items are called out for resolution:

1. **Sheet S5: Relocate the existing fire hydrant located at the intersection of Chase Street and Grove Street to the south on Grove Street approximately 25 feet to alleviate a long-standing turning radius obstruction for fire apparatus turning south on Grove Street from Chase Street.** Relocation of the existing fire hydrant will also negate the requirement for a protective bollard. The current parking arrangement on Chase Street, the location of the hydrant and bollard on Grove Street, and the location of the utility pole on Grove Street opposite the hydrant have significantly restricted the ability for our larger fire apparatus to turn from Chase Street onto Grove Street for a number of years.

(Note: this requirement has not been previously called-out as this department was not provided with a set of off-site improvement plans prior to the set dated above.)
2. **Sheet S8: Speed bump removal and relocation: specification of new speed bump design is not provided for review.** This department approves the current "speed table" design as utilized in other City projects and as provided previously by the Department of Public Works Engineering Department.
3. **Resolution of BFD radio systems modifications (in accordance with BCO 13-63 through BCO 13-68):** The applicant advised this office in a letter dated 16 September 2014 that radio signal strength testing was completed by Burlington Communications, and was determined to meet the minimum requirements for mobile and hand – held fire department radios under existing conditions. Additional radio signal strength testing shall be conducted by an approved technician prior to completion of building construction and, if required, modifications conducted to boost signal strength in the event that the minimum requirements of BCO 13-63 to 68 are not met at

Scott Gustin

From: Barry Simays
Sent: Monday, March 16, 2015 10:04 AM
To: Patrick O'Brien; Seth Lasker; Scott Gustin
Subject: Re: 140 Grove Street

Patrick,

Received and attached to file. Thank you for the update.

BC Barry Simays, CFI
Fire Marshal
Burlington Fire Department
132 North Avenue
Burlington, VT 05401
(802) 864-5577
(802) 658-7665 (Fax)
bsimays@burlingtonvt.gov

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Monday, March 16, 2015 10:01
To: Seth Lasker; Scott Gustin
Cc: Barry Simays
Subject: RE: 140 Grove Street

To all, the email below is an accurate description of what has taken place and we understand the reasons for and the cost of the channel and acknowledge that if this cost cannot be paid via our impact fees for this project that we will pay directly for the necessary upgrades and furthermore understand that this will become a condition of our final approval.

Thank you,

Patrick

From: Seth Lasker [mailto:SLasker@burlingtonvt.gov]
Sent: Tuesday, March 10, 2015 12:54 PM
To: Scott Gustin
Cc: Patrick O'Brien; Barry Simays
Subject: Re: 140 Grove Street

Good afternoon Scott and Mr. O'Brien,

When this project was first purposed we did some testing of our radio system. Both Fire Department staff and Burlington Communications Inc. (BCS) conducted this testing and confirmed that our radio system has serious limitations in the area of the purposed project.

(copy of email sent on Dec, 20, 2013 by BC Simays)

3. The Burlington Fire Department has recently developed significant concerns regarding radio signal reliability for our emergency radio communications system in this area of the City based on location and topography. Our office will require that radio testing be conducted in accordance with BCO 13-63 through 13-68. In the event that the results of this testing are not satisfactory, this project will be required to provide improvements to the reliability of our radio system in this area.

The Fire Department utilizes a repeated radio system for communication with our dispatch center located at the Burlington Police Department. The location and topography of this project is too low for the current radio system to function and our dispatch center is unable to receive radio transmissions from our units operating at that location, in addition our units are not able to receive transmissions from dispatch in some cases as well. As you can imagine this creates several issues for us with the most important one being the safety of our staff. It is very important that dispatch be able to monitor our operations and have the ability to hear requests for help at all times.

Through our testing and work with BCS we have identified a way to use a radio channel that is available to us in partnership with the University of Vermont Medical Center for operations in this area, however this channel would need to be installed at our dispatch center.

This solution would be the most cost effective way to solve this issue, the alternative would have to be the installation of a repeater/receiver at the proposed project site at a much greater cost. The cost of installing this channel is approximately \$4,000.00.

I look forward to working through this with both of you.

Kind regards.

Seth S. Lasker
Chief Engineer
Burlington Fire Department
136 South Winooski Avenue
Burlington, Vermont 05401
(P) 802-865-7578
(F) 802-865-5387

From: Scott Gustin
Sent: Tuesday, March 10, 2015 10:37 AM
To: Seth Lasker
Cc: 'Patrick O'Brien'
Subject: 140 Grove Street

Good morning Seth,

David tells me you've got some concerns relative to emergency services communications at the 140 Grove Street site (SD Ireland). This redevelopment project is undergoing final plat review and will likely be to the Development Review Board in April. I'm putting you in touch with the project manager, Patrick O'Brien, by way of this email so that you can work with him directly to resolve this matter. What I need from you in the mean time is something in writing stating what the concern is and what can be done to address it.

Let me know if you have any questions.

Scott Gustin

From: Seth Lasker
Sent: Tuesday, March 10, 2015 12:54 PM
To: Scott Gustin
Cc: 'Patrick O'Brien'; Barry Simays
Subject: Re: 140 Grove Street

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(copy of email sent on Dec, 20, 2013 by BC Simays)

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The Fire Department utilizes a repeated radio system for communication with our dispatch center located at the Burlington Police Department. The location and topography of this project is too low for the current radio system to function and our dispatch center is unable to receive radio transmissions from our units operating at that location, in addition our units are not able to receive transmissions from dispatch in some cases as well. As you can imagine this creates several issues for us with the most important one being the safety of our staff. It is very important that dispatch be able to monitor our operations and to have the ability to hear requests for help at all times.

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This solution would be the most cost effective way to solve this issue, the alternative would have to be the installation of a repeater/receiver at the purposed project site at a much greater cost. The cost of installing this channel is approximately \$4,000.00.

I look forward to working through this with both of you.

Kind regards.

Seth S. Lasker
Chief Engineer
Burlington Fire Department
136 South Winooski Avenue
Burlington, Vermont 05401
(P) 802-865-7578

(F) 802-865-5387

From: Scott Gustin
Sent: Tuesday, March 10, 2015 10:37 AM
To: Seth Lasker
Cc: 'Patrick O'Brien'
Subject: 140 Grove Street

Good morning Seth,

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Let me know if you have any questions.

Scott

Scott Gustin, AICP, CFM
Senior Planner
Dept. of Planning & Zoning
149 Church Street
Burlington, VT 05401
(802) 865-7189

Patrick O'Brien

RECEIVED

FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

EXHIBIT # 9

Subject: FW: Grove Street Apartments

From: Dillon, Scott [<mailto:Scott.Dillon@state.vt.us>]

Sent: Tuesday, September 23, 2014 1:25 PM

To: Patrick O'Brien

Cc: Duggan, James

Subject: RE: Grove Street Apartments

Hey Patrick- This is to confirm that we conducted a site visit to the proposed Grove St. Apartment project area on July 11, 2014 and did not identify any archaeologically sensitive areas within the proposed project footprint. We will provide a final comment letter when you finalize plans and file your Land Use Permit application.

Thanks, Scott

R. Scott Dillon
Survey Archeologist
Vermont Division for Historic Preservation
One National Life Drive, Davis Bldg, 6th Floor
Montpelier, VT 05620-0501
802-272-7358
scott.dillon@state.vt.us

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]

Sent: Monday, September 22, 2014 10:55 AM

To: Dillon, Scott

Subject: Grove Street Apartments

Hello Scott.

As discussed I have a condition in the Preliminary Approval from the Burlington Development Review Board for this project that states:

"Prior to final plat application, the applicant shall contact the Vermont Division for Historic Preservation to inquire as to whether there are any studies of the area that may indicate heightened archaeological significance".

Ironically, I think I have satisfied their condition as not only have I contacted you, but we also did a site visit. Having said that, I think it would be best that either you write me a letter or respond to this email saying that yes, I have indeed inquired and that there is no indication of heightened archaeological significance.

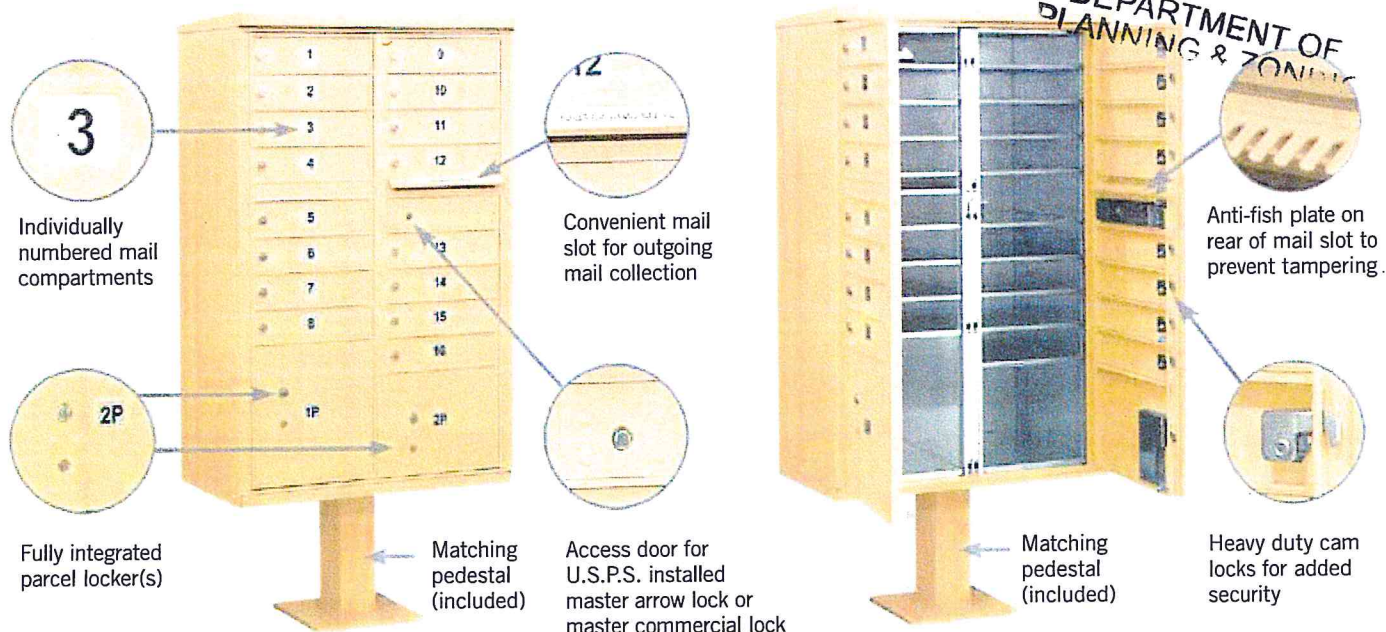
Thank you,

Patrick

Salsbury Industries is officially licensed and authorized by the U.S. Postal Service to manufacture Cluster Box Units (CBU's).

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FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING

STANDARD FEATURES

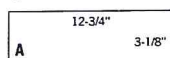


Front views of 3316 in sandstone finish displayed

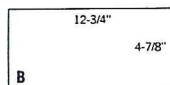
CBU SPECIFICATIONS & OPTIONS

MAILBOX DOOR SIZES

Each aluminum mailbox door includes a heavy duty five (5) pin cylinder cam lock with a dust/rain shield and three (3) keys.



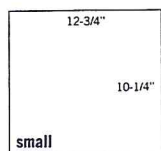
#3351 ¹ Replacement
"A" door and lock
\$50.00



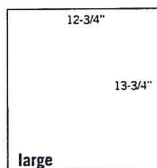
#3352 ¹ Replacement
"B" door and lock
\$60.00

PARCEL LOCKER DOOR SIZES

Each CBU includes one or two (2) fully integrated parcel lockers. Parcel lockers offer tenants a convenient way to receive packages on site and are fit with a two (2) key security system.



#3353 ¹ Replacement parcel
locker door and tenant lock - small
\$80.00



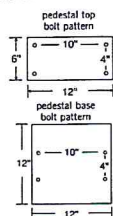
#3354 ¹ Replacement
parcel locker door
and tenant lock - large
\$90.00

PEDESTALS

#3385 ¹ Replacement pedestal
for #3316 and #3313 (14-1/2" H)
\$125.00

#3395 ¹ Replacement pedestal
for #3308 and #3312 (28-1/2" H)
\$125.00

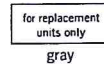
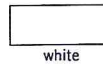
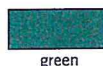
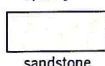
#3394 Pedestal mounting kit
for new concrete installations
(4) 1/2" X 8" anchor (J) bolts
\$25.00



FINISHES

Durable and corrosion resistant CBU's feature a powder coated finish available in sandstone, bronze, green, black or white. Note - gray is available for replacement units only and is not available on Regency Decorative CBU's and accessories.

1 Specify



IDENTIFICATION SYSTEMS

Each CBU mailbox door has a 1" high number (1-8, 1-12, 1-16, 1-13 for Type I, Type II, Type III and Type IV, respectively). The outgoing mail compartment is labeled "Outgoing Mail" and the parcel locker(s) are labeled with a "1P" on #3312 and #3313 and with a "1P" and a "2P" on #3308 and #3316. Custom identification systems are available as an option upon request.

CUSTOM ENGRAVED DOOR PLACARDS

1-3/4" W x 1-1/2" H custom engraved self-adhesive door placards are available as an option upon request. (#3367 - \$3.00)



#3367

CUSTOM ENGRAVED UNIT PLACARDS

8" W x 1" H custom engraved self-adhesive unit placards are available as an option upon request. (#3363 - \$15.00)



#3363

LOCKS

Each CBU mailbox door includes a heavy duty five (5) pin cylinder cam lock with a dust/rain shield and three (3) keys (2,000 different key changes).

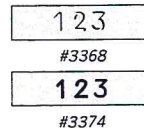
- (#3390 - \$15.00)
- Additional keys per lock when ordering (#3398 - \$3.00)
- Key blanks - box of (50) (#3399 - \$35.00)



#3390

CUSTOM ENGRAVED DOORS

- Custom engraved door - regular (#3368 - \$5.00)
- Custom engraved door - black filled (#3374 - \$5.00)



#3368

#3374

OUTGOING MAIL COMPARTMENTS

One additional compartment in each CBU is labeled "Outgoing Mail" and includes a weather protection flap and an 11-3/4" W x 3/4" H mail slot.

OUTGOING MAIL SLOT PLUG KIT

An outgoing mail slot plug kit is available for installations not serviced by the U.S.P.S. (#3370 - \$35.00)

MASTER COMMERCIAL LOCK

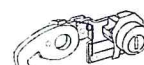
Factory installed if for private access - for access door and parcel lockers - with (2) keys (#3375 - \$30.00)



#3375

TENANT PARCEL LOCKER LOCK

For parcel locker door - with (3) keys (#3376 - \$40.00)



#3376

Note: For E series replacement CBU locks, see 3390-E on page 62.

EXHIBIT # 11

Date: Feb 2, 2015



RECEIVED
Swaney Lighting Associates
15 Pleasant Hill Rd
Scarborough ME 04074
Phone: (207) 883-7100
From: THERESA FREEMAN X
DEPARTMENT OF
PLANNING & ZONING

Project Grove St Appartments - Burl VT
Quote# SLA14-27041
Location burlington vt
Contact:

ATTACHED WE ARE SENDING YOU 1 COPIES OF THE FOLLOWING ITEMS:

- | | | |
|-----------------------------------|--|--------|
| ☐ Drawings | ☐ Specifications | Other: |
| ☐ Prints | ☐ Information | |
| ☐ Plans | ☒ Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|--|---------------------------------|
| ☐ Prior Approval | ☐ Resubmittal for Approval | ☐ Record |
| ☐ Approval | ☐ Corrections | Bids due on: |
| ☐ Approval as Submitted | ☐ Your Use | Other: |
| ☐ Approval as Noted | ☒ Review and Comment | |

Type	MFG	Part
L1-2	BEACON PRODUCTS	CAP-21-24NB-27-4K-T2-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L1-3	BEACON PRODUCTS	CAP-21-24NB-27-4K-T3-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L1-4	BEACON PRODUCTS	CAP-21-24NB-27-4K-T4-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L2	BEACON PRODUCTS	CAP-21-24NB-55-4K-T3-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L3	PRESCOLITE	LC6LED120 / 6LCLED635K8
L5	SPAULDING	TRP30L-4K-035-4-U-BL-SCP
2L1-4	BEACON PRODUCTS	2-CAP-21-24NB-27-4K-T4-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-C-P-BBT

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT
Catalog Number:

CAP-21-24NB-27-4K-T2-UNV-3RNW-BBT

Notes:

Type:**L1-2**

SLA14-27041


BEACON
design . performance . technology
www.beaconproducts.com

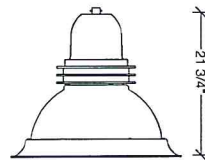
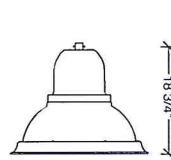
Type:
Project Name:
Notes:

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FEB 18 2015
rev. 03.14.2014
DEPARTMENT OF
PLANNING & ZONING
Urban LED Luminaires

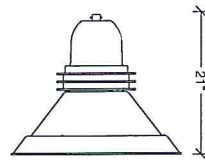
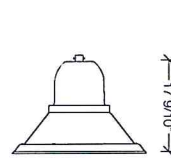
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

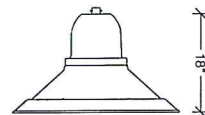
CAP - Round Shade


26" - CAP
Shown with optional 3RNW rings
EPA: 1.39 ft²
40 lbs

21" - CAP
EPA: 1.04 ft²
35 lbs

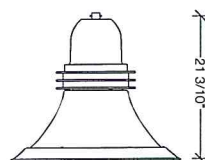
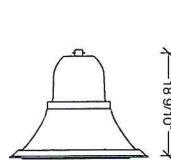
MRDS - Deep Shade


26" - MRDS
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MRDS
EPA: 1.00 ft²
35 lbs

MRSS - Shallow Shade


26" - MRSS
EPA: 1.17 ft²
40 lbs

MAR - Curved Shade


26" - MAR
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MAR
EPA: 1.00 ft²
35 lbs
A. MODEL

CAP-21	21" Capitol
MRDS-21	21" Miramar deep shade
MAR-21	21" Maritas
CAP-26	26" Capitol
MRSS-26	26" Miramar shallow shade
MRDS-26	26" Miramar deep shade
MAR-26	26" Maritas

B. ENGINE-WATTS

24NB-27	27 Watts - LED array
24NB-55	55 Watts - LED array
36NB-80	80 Watts - LED array
48NB-110	110 Watts - LED array ¹
60NB-136	136 Watts - LED array ¹

3 = 26" Urban only

C. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K (std.)

D. OPTICS

T2	type II
T3	type III
T4	type IV
T5R	type V, rectangular
T5QM	type V, square medium
T5W	type V, round wide

E. VOLTAGE

UNV	120-277V
347	347V
480	480V

F. ELECTRICAL OPTIONS

PEC	photocell, button
2PF	dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW	no rings
3RNW	three cast rings

H. COLOR

BBT	basic black textured
BMT	black matte textured
WHT	white textured
MBT	metallic bronze textured
BZT	bronze textured
DBT	dark bronze textured
GYS	gray smooth
DPS	dark platinum smooth
GNT	green textured
MST	metallic silver textured
MTT	metallic titanium textured
OWI	old world iron
RAL	

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-27-4K-T2-UNV-3RNW-

BBT

Notes:

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L1-2
FEB 18 2015
SLA14-27041



DEPARTMENT OF
PLANNING & ZONING
rev. 03/21/2014
URBAN (LED)
Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optb)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number

AA44-S-4-B-P-BBT

Notes:

Type:

 AA44-S-4-B-P-BBT
SLA11-27041

FEB 18 2015

 DEPARTMENT OF
PLANNING & ZONING

rev. 02.24.2014

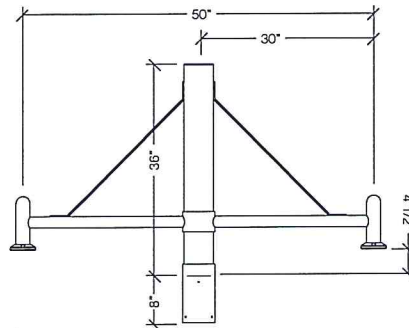
 AA-44 STRUT
Arms

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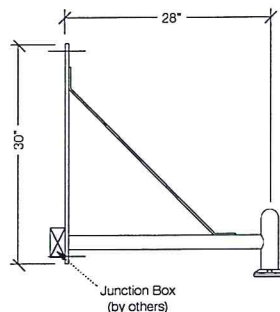
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Project Name:
Notes:

 Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

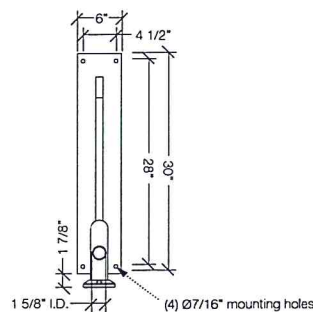
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the ap-propriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanne HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø											
wall	weight	12	-	-	-	-	-	-	-	-	-
Ø4"	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
	weight	-	15	20	22	20	25	27	25	30	32
Ø5"	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
	weight	-	18	23	25	23	28	30	28	33	35
Ø6"	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
	weight	-	21	26	28	26	31	33	31	36	38

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:
CAP-21-24NB-27-4K-T3-UNV-3RNW-
BBT
Notes:

Type:

L1-3

SLA14-27041



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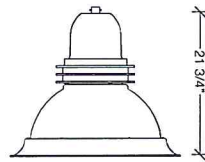
Type:
Project Name:
Notes:

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FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING
JAN 14, 2014
URBAN (LED)
Urban LED Luminaires

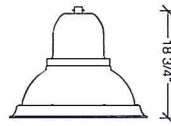
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

CAP - Round Shade

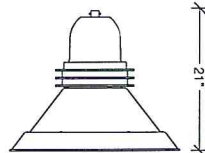


26" - CAP
Shown with optional 3RNW rings
EPA: 1.39 ft²
40 lbs

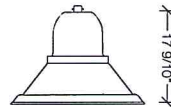


21" - CAP
EPA: 1.04 ft²
35 lbs

MRDS - Deep Shade

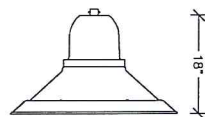


26" - MRDS
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs



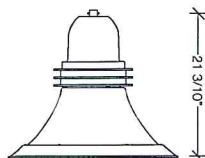
21" - MRDS
EPA: 1.00 ft²
35 lbs

MRSS - Shallow Shade

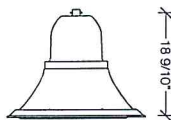


26" - MRSS
EPA: 1.17 ft²
40 lbs

MAR - Curved Shade



26" - MAR
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs



21" - MAR
EPA: 1.00 ft²
35 lbs

A. MODEL

CAP-21	21" Capitol
MRDS-21	21" Miramar deep shade
MAR-21	21" Maritas
CAP-26	26" Capitol
MRSS-26	26" Miramar shallow shade
MRDS-26	26" Miramar deep shade
MAR-26	26" Maritas

B. ENGINE-WATTS

24NB-27	27 Watts - LED array
24NB-55	55 Watts - LED array
36NB-80	80 Watts - LED array
48NB-110	110 Watts - LED array ³
60NB-136	136 Watts - LED array ³

³ = 26" Urban only

C. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K (std.)

D. OPTICS

T2	type II
T3	type III
T4	type IV
T5R	type V, rectangular
T5QM	type V, square medium
T5W	type V, round wide

E. VOLTAGE

UNV	120-277V
347	347V
480	480V

F. ELECTRICAL OPTIONS

PEC	photocell, button
2PF	dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW	no rings
3RNW	three cast rings

H. COLOR

BBT	basic black textured
BMT	black matte textured
WHT	white textured
MBT	metallic bronze textured
BZT	bronze textured
DBT	dark bronze textured
GYS	gray smooth
DPS	dark platinum smooth
GNT	green textured
MST	metallic silver textured
MTT	metallic titanium textured
OWI	old world iron
RAL	

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-27-4K-T3-UNV-3RNV-
BBT

Notes:

Type:

L1-3

SLA14-27041



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Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

Type:

SLA14-27041

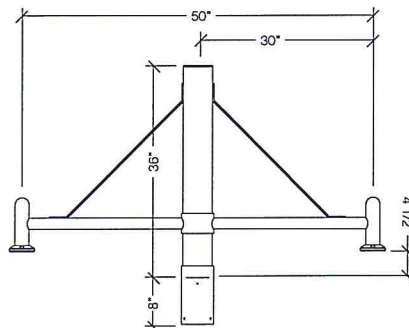
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rev. 02.24.2014

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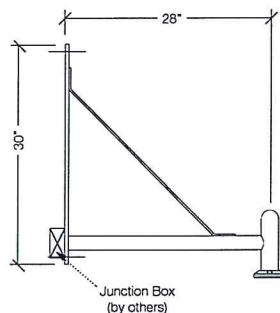
Type:
Project Name:
Notes:

Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

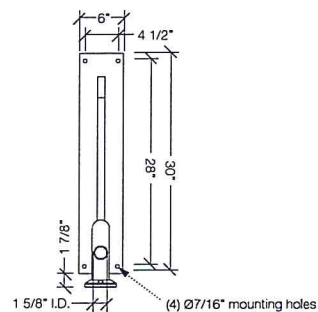
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the ap-propriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacon V polyester powder-coat electro-statically applied and thermocured. Beacon V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	12	-	-	-	-	-	-	-	-	-	-
	Ø4"	EPA	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT
Catalog Number:CAP-21-24NB-27-4K-T4-UNV-3RNV-
BBT

Notes:

Type:**L1-4**

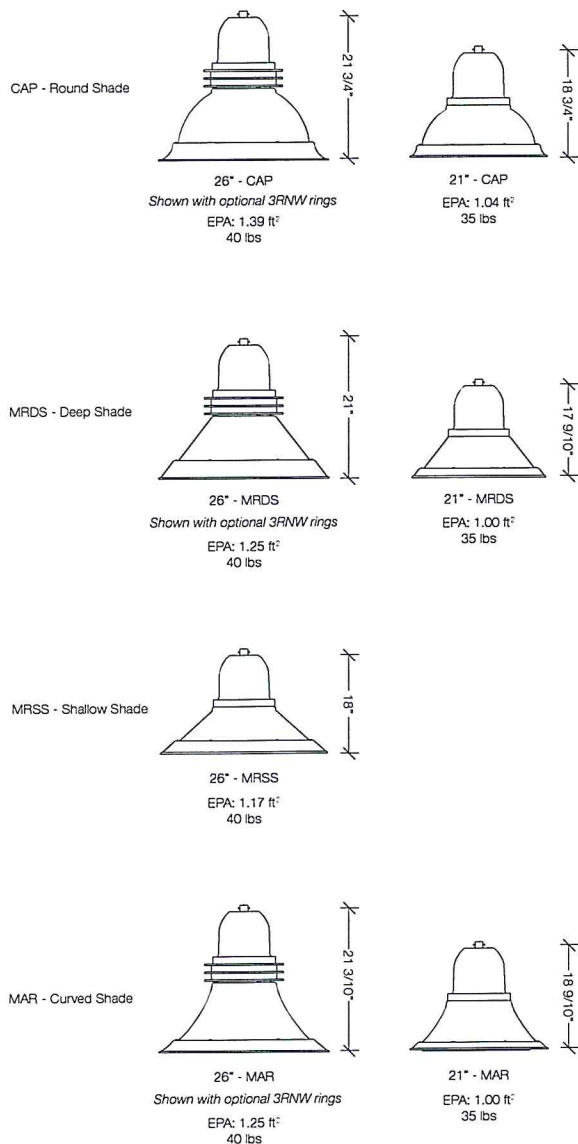
SLA 4-2704


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Type:
Project Name:
Notes:

rev. 03.14.2014
DEPARTMENT OF
PLANNING & ZONING
Urban LED Luminaires

Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNV	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS**A. MODEL**

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array¹
60NB-136 136 Watts - LED array¹
3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings
3RNV three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-27-4K-T4-UNV-3RNV-1 Type:
BBT

Notes:



DEPARTMENT OF
PLANNING & ZONING
Rev. 03.14.2011
URBAN (LED) LUMINAIRE
Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/MK. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

Type:

SLA14-2704

FEB 18 2015

 DEPARTMENT OF
PLANNING & ZONING

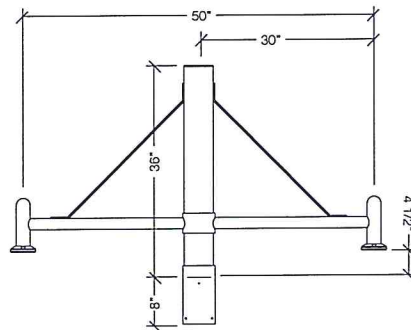
 rev. 02.24.2014
AA-44 STRUT
Arms

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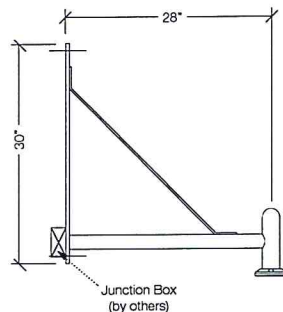
 Type:
Project Name:
Notes:

 Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

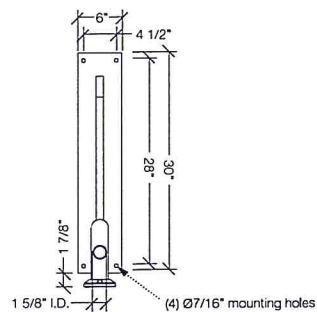
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	12	-	-	-	-	-	-	-	-	-	-
	Ø4"	EPA	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-55-4K-T3-UNV-3RNW

BBT

Notes:

Type:

L2
SLA14-3204

FEB 18 2015

DEPARTMENT OF PLANNING & ZONING
rev. 03.14.2014
URBAN (LED)
Urban LED Luminaires

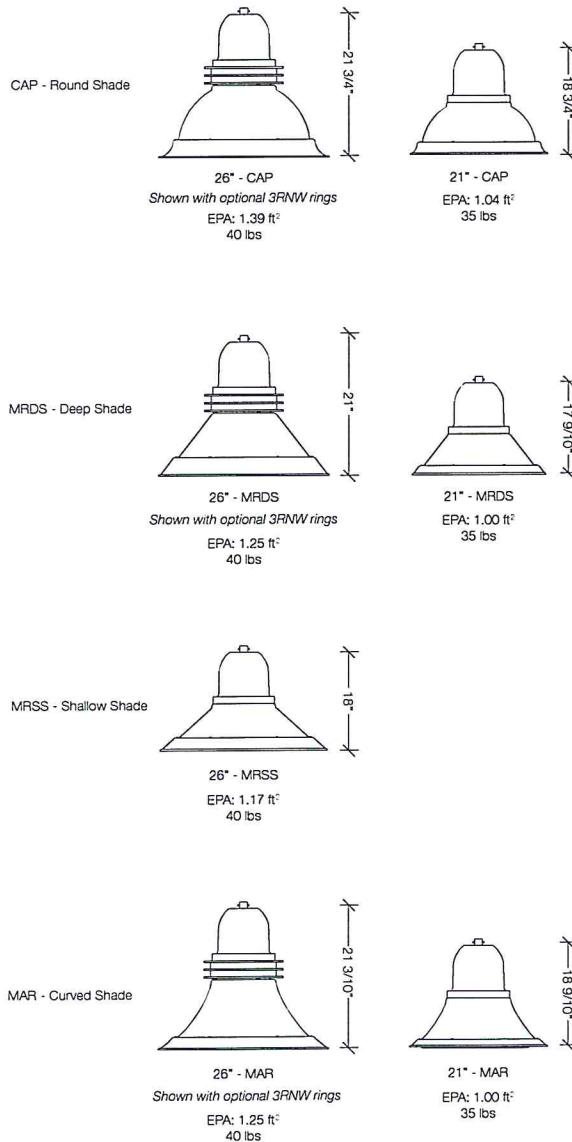


BEACON
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www.beaconproducts.com

Type:
Project Name:
Notes:

Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS



A. MODEL

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array³
60NB-136 136 Watts - LED array³
3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings
3RNW three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-55-4K-T3-UNV-3RNV-BBT

Notes:

Type:

FEB 12 2015

SLA14-27041



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URBAN (LED)

Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

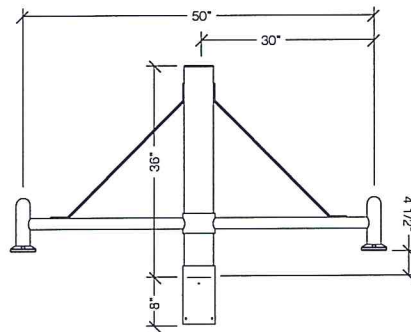
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DEPARTMENT OF
PLANNING & ZONING
rev. 02.24.2014
AA-44 STRUT
Arms

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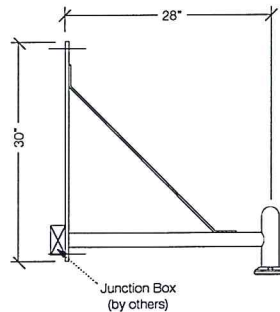
Type:
Project Name:
Notes:

Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

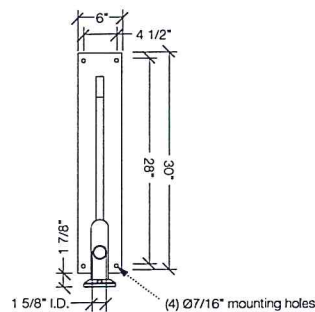
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø											
wall	weight	12	-	-	-	-	-	-	-	-	-
Ø4"	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
	weight	-	15	20	22	20	25	27	25	30	32
Ø5"	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
	weight	-	18	23	25	23	28	30	28	33	35
Ø6"	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
	weight	-	21	26	28	26	31	33	31	36	38

Submitted by Swaney Lighting Associates

**Job Name:**

Grove St Apartments - Burl VT

Catalog Number

LC6LED120 / 6LCLED635K8

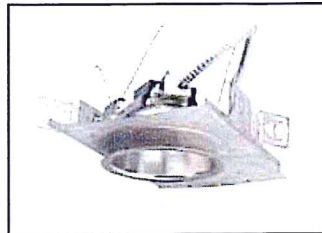
Notes:

Type:

L3

FEB 18 2015

SLA14-2001

**6" LED Downlight****LC6LED**

120 or 277V

0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial (LC6LED) is a 6" commercial grade LED downlight with available outputs between 1000-1600 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (LED5), 28°C (LED6), 25°C (LED7). Free Air Flow around fixture is required for optimal life performance.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC6LED uses either 36, 54, 72 low power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SCDM color consistency. The use of multiple low power LED's allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LED's. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC6LED120DM - 6LCLED535K8WT

HOUSING	VOLTAGE	HOUSING OPTIONS	TRIM APERTURE	OUTPUT	KELVIN	CRI	REFLECTOR FINISH	REFLECTOR COLOR	REFLECTOR OPTIONS	ACCESSORIES
☒ LC6LED 6" LED Housing	☒ 120 120V ☒ 277 277V	☒ Blank No Dimming ☒ DM 0-10V dimming to 10% ☒ WIH Wi-Hubb Enabled ☒ EM³ Bodine BSL310C-DF Battery Pack with integral test switch and indicator light ☒ EMR Bodine BSL310C Battery Pack with remote test switch and indicator light	☒ 6LCLED 6" Open Reflector/ Light Engine Assembly	☒ 5 Nominal 1000 Delivered Lumens ☒ 6 Nominal 1400 Lumens Delivered ☒ 7 Nominal 1600 Lumens Delivered	☒ 27K 2700 Kelvin ☒ 30K 3000 Kelvin ☒ 35K 3500 Kelvin ☒ 40K 4000 Kelvin	☒ 8 80+ CRI	☒ Blank Clear Alzak, Semi- Diffuse	☒ WH¹ White Paint	☒ WT White Trim ☒ EM³ Pre-punched reflector to accept integral test switch ☒ WF Wide Flange ☒ WW^{5,6} Wall Wash	☒ B24 Set of two(2) 24" bar hangers for T-bar ceiling ☒ B6 Set of two (2) bar hange ceiling joist up to 24" ce ☒ LG15^{2,4} DualLite 100VA Surface Mount LiteGear Emergen Lighting Inverter ☒ LG17^{2,4} DualLite 100VA Recessed Mount LiteGear Emergen Lighting Inverter ☒ LG17^{2,4} DualLite 100VA Recessed T-Grid LiteGear Emergen Lighting Inverter ☒ LG25^{2,4} DualLite 250 VA Surface Mount LiteGear Emergen Lighting Inverter ☒ SCA6D Sloped ceiling adapter (s note on page 4)

¹ Requires WT option² See LC6LED and LiteGear Compatibility on page 3³ EM must be selected on both the housing and the trim, not compatible with WW trim⁴ Not compatible with EM or EMR⁵ Damp location only⁶ Not compatible with EM (EMR is compatible)

A Division of Hubbell Lighting, Inc.

In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
Web: www.prescolite.com • Tech Support: (888) 777-4832

LFR-LED-01

DEPARTMENT OF
PLANNING & ZONING

FIRM NAME:

PROJECT:

LiteFrame

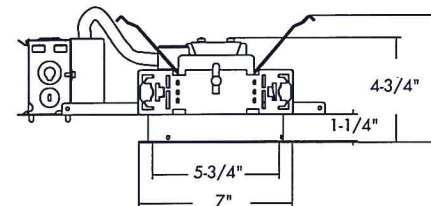
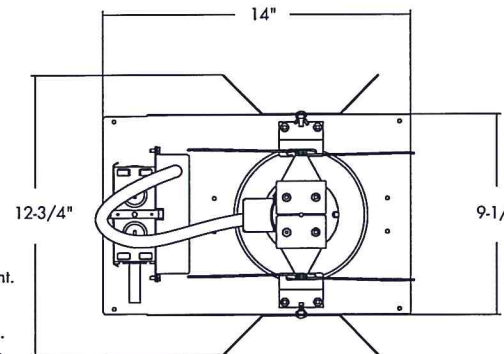
Ceiling Cutout: 6"

Maximum Ceiling Thickness: 1"

For conversion to millimeter

multiply inches by 25.4

Not to Scale

**6LCLED 5 & 6**

*See page 5 for 6LCLED 7 line art

*See page 5 for 6LCLEDEM line art

Submitted by Swaney Lighting Associates

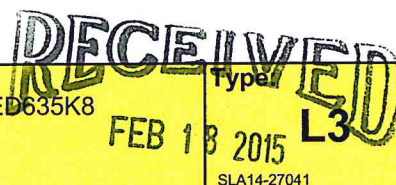
**Job Name:**

Grove St Apartments - Burl VT

Catalog Number:

LC6LED120 / 6LCLED635K8

Notes:



SLA14-27041

PHOTOMETRIC DATA
DEPARTMENT OF PLANNING & ZONING
LiteFrame - 6" LC6LED Downlight

DRIVER DATA	6LCLED5xxx	6LCLED6xxx	6LCLED7xxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.143 (120v)	0.200 (120v)	0.148 (120v)
	0.062 (277v)	0.087 (277v)	0.108 (277v)
Input Power	17.1W	24.0W	29.8W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

Lumen Multiplier Table

Photometrics for the LC6LED are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

LC6LED120 6LCLED535K8

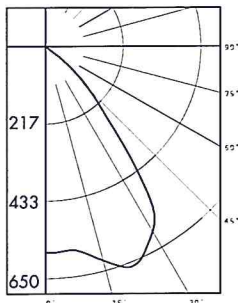
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.1W

Fixture Delivered Lumens: 925

Fixture Efficacy: 54.0

Spacing Criteria: 1.3

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	560
5	552
15	593
25	621
35	444
45	161
55	10
65	2
75	1
85	0
90	0

Test No. 1911.6074

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	920.4
0-90	925.1
90-180	0.0
0-180	925.1

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average - 0°
45°	12691
55°	873
65°	326
75°	164
85°	62

COEFFICIENTS OF UTILIZATION

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance											
	80%	70%	50%	30%	10%	80%	70%	50%	30%	10%	80%	70%
20% Effective Floor Cavity Reflectance												
% Wall Reflectance												
1	113	110	107	105	110	108	105	103	104	102	100	100
2	106	101	96	93	104	99	95	92	96	93	90	88
3	100	93	87	83	98	91	86	82	89	84	81	78
4	94	86	79	75	92	84	79	74	82	77	73	70
5	88	79	72	68	87	78	72	67	76	71	67	64
6	83	73	66	62	82	72	66	61	71	65	61	58
7	78	68	61	56	77	67	61	56	66	60	56	53
8	74	63	56	52	72	62	56	51	61	55	51	48
9	69	59	52	47	68	58	52	47	57	51	47	44
10	65	55	48	44	64	54	48	44	53	47	43	40

LC6LED120 6LCLED535K8

LC6LED120 6LCLED635K8

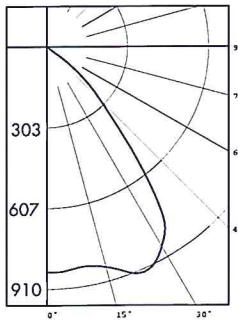
LED Light Engine: 3500K, 80+ CRI

System Wattage: 24.0W

Fixture Delivered Lumens: 1375

Fixture Efficacy: 57.3

Spacing Criteria: 1.3

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	836
5	824
15	847
25	869
35	649
45	249
55	16
65	4
75	1
85	0
90	0

Test No. 1910.6073

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1369.3
0-90	1375.2
90-180	0.0
0-180	1375.2

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average - 0°
45°	19982
55°	1447
65°	541
75°	244
85°	89

COEFFICIENTS OF UTILIZATION

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance											
	80%	70%	50%	30%	10%	80%	70%	50%	30%	10%	80%	70%
20% Effective Floor Cavity Reflectance												
% Wall Reflectance												
1	113	110	107	105	110	108	105	103	104	102	100	100
2	106	101	96	93	104	99	95	92	96	93	90	88
3	100	93	87	83	98	91	86	82	89	84	81	78
4	94	86	79	75	92	84	79	74	82	77	73	70
5	88	79	72	68	87	78	72	67	76	71	67	64
6	83	73	66	62	82	72	66	61	71	65	61	58
7	78	68	61	56	77	67	61	56	66	60	56	53
8	74	63	56	52	72	62	56	51	61	55	51	48
9	69	59	52	47	68	58	52	47	57	51	47	44
10	65	55	48	44	64	54	48	44	53	47	43	40

LC6LED120 6LCLED635K8



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Hubbell Lighting, Inc.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
LC6LED120 / 6LCLED635K8

Notes:

Type:

L3

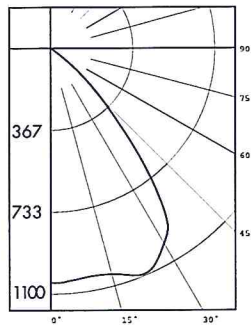
14-27041

PHOTOMETRIC DATA

RECEIVED
FEB 13 2015
LifeFrame - 6" LC6LED Downlight

DEPARTMENT OF
PLANNING & ZONING

LC6LED120 6LCLED735K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 29.8W
Fixture Delivered Lumens: 1598
Fixture Efficacy: 53.6
Spacing Criteria: 1.3

CANDELA DISTRIBUTION

DEG	CANDELA
0	1003
5	996
15	998
25	1020
35	822
45	314
55	25
65	5
75	2
85	0
90	0

Test No. 1912.6072

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1590.1
0-90	1597.6
90-180	0
0-180	1597.6

LUMINANCE DATA IN CANDELA/SQ. METER

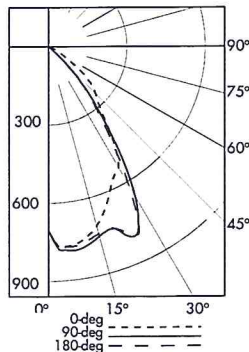
Angle in Vertical	Average - 0°
45°	22934
55°	1376
65°	538
75°	272
85°	75

COEFFICIENTS OF UTILIZATION

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance					% Effective Floor Cavity Reflectance					% Wall Reflectance				
	80%	70%	50%	30%	10%	80%	70%	50%	30%	10%	70	50	30	10	50
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1	113	110	107	105	103	110	108	105	103	103	101	100	98	97	96
2	106	101	96	93	91	104	99	95	91	96	92	89	83	80	88
3	100	93	87	83	81	98	91	86	82	89	84	81	86	82	79
4	94	85	79	74	72	92	84	78	74	82	77	73	80	76	72
5	88	79	72	67	66	86	78	72	67	76	70	66	74	69	65
6	83	73	66	61	61	81	72	66	61	70	65	60	69	64	60
7	78	67	61	56	56	76	67	60	56	65	59	55	64	59	55
8	73	63	56	51	51	72	62	55	51	61	55	51	60	54	50
9	68	58	52	47	47	68	58	51	47	57	51	47	56	50	46
10	65	54	48	43	43	64	54	48	43	53	47	43	52	47	43

LC6LED120 6LCLED735K8

LC6LED120-6LCLED635K8 WW

LED Light Engine: 3500K, 80 CRI
System Wattage: 15.6W
Fixture Delivered Lumens: 1051
Fixture Efficacy: 67

CANDELA DISTRIBUTION

DEG	0.0	90.0	180.0
0	706	706	706
5	768	783	772
15	712	753	743
25	574	797	798
35	422	435	384
45	254	121	119
55	121	3	4
65	33	1	2
75	2	1	1
85	0	0	0
90	0	0	0

Test No. 7829

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	19685	9377	9222
55°	11561	287	382
65°	4279	130	259
75°	423	212	212
85°	0	0	0

				MULTIPLE UNITS	
1'	2'	3'	4'	UNITS ON 3' CENTER	UNITS ON 4' CENTER

3' DISTANCE FIXTURE MOUNTED OUT FROM WALLS
FOOTCANDLE DISTRIBUTION ON WALL SURFACE

DISTANCE FROM CEILING IN FEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	9	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	14	12	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	13	11	7	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	11	10	8	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	8	8	7	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	6	6	6	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	5	5	5	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	4	4	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

LC6LED120-6LCLED635K8 WW

Test No. 7829


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Hubbell Lighting, Inc.

Submitted by Swaney Lighting Associates 	Job Name: Grove St Apartments - Burl VT	Catalog Number: LC6LED120 / 6LCLED635K8 Notes:	Type: L3 SLA14-27041
--	---	--	--

PHOTOMETRIC DATA

LiteFrame - 6" IC LED Downlight

DIMMING COMPATIBILITY TABLE

Control Manufacturer	Wallbox Dimmer	Power Booster Available
Douglas Lighting Controls	WPC 5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V) Tap Glide Heatsink TGH1500fam120 (120V) Oasis DA2000FAMU (120/277V)	
Honeywell, Inc.	EL731A1019 and EL731SA1009	EL730SA1010
HUNT Dimming	Preset Slide: PS-010-IV-120V and PS-010-WH-120V Preset Slide: PS-010-3W-IV-120V and PS-010-3W-WH-120V Preset Slide: PS-010-IV-277V and PS-010-WH-277V Preset Slide: PS-010-3W-IV-277V and PS-010-3W-WH-277V Preset Slide, controls FD-010: PS-IFC-010-IV- and PS-IFC-010-32-WH-120/277V Preset Slide, controls FD-010: PS-IFC-010-32-IV- and PS-IFC-010-3W-WH-120/277V Remoted mounted unit: FD-010120V and FD-010-277V	
Lehigh Electric Products Co.	Solitaire	PBX
Leviton Lighting Controls Div.	Leviton Centura Fluorescent Control System IlumaTech™ IP7 Series	CN100 PE300
Lutron Electronics Co., Inc.	Visit www.lutron.com/advance for the latest control information and selection.	
PDM Electrical products	WPC-5721	
Starfield Controls	TR61 with DALI Interface port	RT03 DALInet Router
The Watt Stopper, Inc.	LS-4 used with LCD-101 and LCD-103	

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Central Inverters

For fixture full light output in back-up mode, Prescolite and Dual-lite have jointly tested the LiteFrame Commercial LED with the 100 (LG1) and 250 (LG2) VA LiteGear inverters. For more information on LiteGear go to http://www.dual-lite.com/resources/litegear_luminaire_loading_chart/

wiHUBB®

Fixture comes with a pre-installed In-Fixture Module (1 relay, 0-10V) compatible with the HBA wiHUBB system. Actual dimming requires the selection of 0-10V dimming ballast as well. Consult factory for compatibility with EM fixtures.



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Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

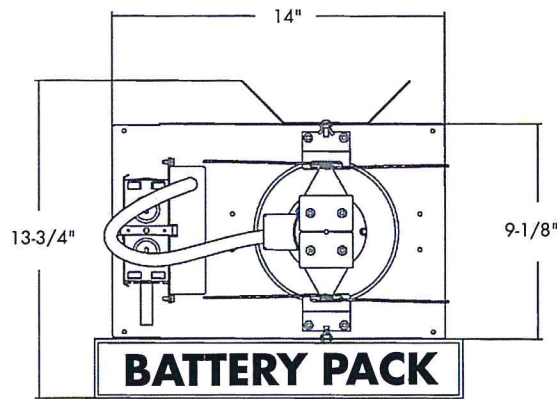
Catalog Number:
LC6LED120 / 6LCLED635K8

Notes:

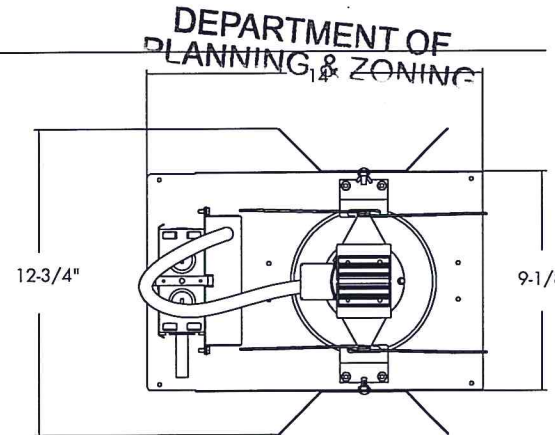
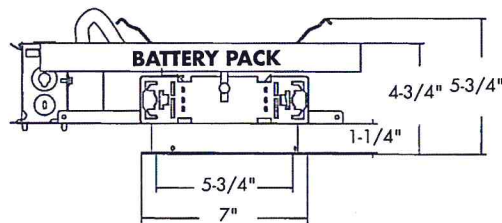
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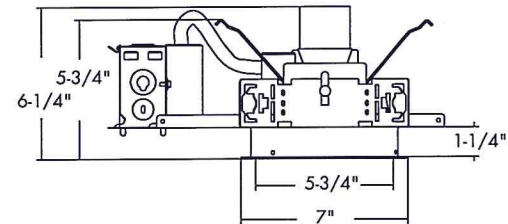
PHOTOMETRIC DATA



LC6LED EM



LC6LED 7



SCA6D

When ordering a sloped ceiling adapter, specify the degree of slope in 5° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	925
Watts	17.12
Lumens per Watt (Efficacy)	54

Color Accuracy
Color Rendering Index (CRI) 83

Light Color
Correlated Color Temperature (CCT) 3434 (Bright White)

Warm White | Bright White | Daylight

2700K | 3000K | 4500K | 6500K

Visit www.lightingfacts.com for the Label Reference Guide

Registered Name: Hubs 48430 (12/12/2013)
Model Number: LC6LED120 (12/12/2013)
Type: Recessed Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	1375
Watts	23.98
Lumens per Watt (Efficacy)	57

Color Accuracy
Color Rendering Index (CRI) 83

Light Color
Correlated Color Temperature (CCT) 3423 (Bright White)

Warm White | Bright White | Daylight

2700K | 3000K | 4500K | 6500K

Visit www.lightingfacts.com for the Label Reference Guide

Registered Name: Hubs 48430 (12/12/2013)
Model Number: LC6LED120 (12/12/2013)
Type: Recessed Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	1598
Watts	29.79
Lumens per Watt (Efficacy)	53

Color Accuracy
Color Rendering Index (CRI) 83

Light Color
Correlated Color Temperature (CCT) 3418 (Bright White)

Warm White | Bright White | Daylight

2700K | 3000K | 4500K | 6500K

Visit www.lightingfacts.com for the Label Reference Guide

Registered Name: Hubs 48430 (12/12/2013)
Model Number: LC6LED120 (12/12/2013)
Type: Recessed Downlight



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Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:
TRP30L-4K-035-4-U-BL-SCP

Notes:

TRP
LED
ARCHITECTURAL WALLPACK

NEW

Cat.#

Job

Type



Approvals

SPECIFICATIONS

Applications:

- Architectural wallpack in stylish Trapezoid shape with molded contours to accentuate building architecture. Provides excellent illumination in energy-saving LED systems.

Construction:

- Die-cast aluminum housing and door
- Seven powder coat standard finishes, plus custom color options

LED:

- 30 high power LEDs deliver up to 5,062 lumens
- Up to 105 lumens per watt
- Variety of IES distribution patterns - Type II, III, and IV (Forward Throw)
- 3000K - 80 CRI, 4000K - 70 CRI, and 5000K - 67 CRI, CCT nominal

Electrical:

- Two driver options: 34w at 350mA (1 driver) and 53w at 525mA (1 driver)
- Operating temperature: -30°C/-22°F to 40°C/104°F

Electrical (Cont.):

- 120-277VAC, 50/60Hz
- Power factor ≥ 90%
- THD (Total Harmonic Distortion) <20%
- 10 KA, 10 KV, 270 joules surge suppressor

Controls:

Drivers are 0-10V dimming standard. Photocell and occupancy sensors available for complete on/off and dimming control.

Listings:

- UL1598 listed for use in wet locations
- 4K and 5K models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>
- Zero uplight (U0), dark sky, neighbor friendly
- Drivers IP66 and RoHS compliant

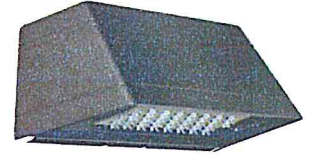
TRP-BBU Egress Wallpack:

Designed to meet strict 1fc minimum requirements. At 12ft mounting height 1fc covers 16x16ft area, well beyond the 10x10ft standard; No uplight, external test button; 120V or 277V only; Rated -20°C to 35°C

Warranty:

For more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>

PRODUCT IMAGE(S)



TRP



TRP with Motion Sensor



TRP with BBU

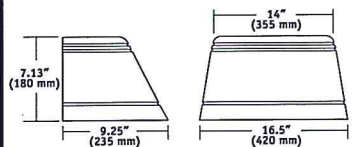
SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
TRP	16 (7.3)	18.5 (47)	9.5 (24)	11.5 (29)

CERTIFICATIONS/LISTINGS



DIMENSIONS



TRP
Weight
13.2 lbs 5.5

ORDERING INFORMATION

ORDERING EXAMPLE: TRP-30L5K-053-2-U-DB

FAMILY	# OF LEDS	CCT	DRIVE CURRENT	DISTRIBUTION	VOLTAGE	FINISH	CONTROL OPTIONS	OPTIONS
TRP Trapezoid	30L 30 High brightness LEDs	3K* 3000K 4K 4000K 5K 5000K	035* 350mA 053 525mA	2 Type II 3* Type III 4 Type IV	U 120V-277V 1 ^{1/2} 120V 2 ¹ 208V 3 ¹ 240V 4 ^{1/2} 277V	CC ³ Custom Color BL Black DB Bronze FG Forest Green GR Gray PS Platinum RD Red WH White	PC ¹ Photocell (Must specify individual voltage) SC0 ^{2,5} Motion sensor On/Off control, No light output when no motion detected SCP ^{2,5} Programmable motion control, factory default is 10% light output	BBU ^{1,6} Integrated battery 120 or only rated -20°C to 120°C (Must specify individual voltage) F ¹ Fusing (Must specify individual voltage)

¹ Must specify individual voltage for BBU, PC and Fusing options

² Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

³ Consult factory for Custom Color option

⁴ DLC qualification 4K and 5K models only

⁵ PC option not applicable, included in sensor. For SCP, PC function turns on to lower setting until motion is detected

⁶ BBU only available in TRP, 350mA, Type III, 120V or 277V

ACCESSORIES - Order separately

Catalog Number	Description
SCP-REMOTE ²	Remote control for SCP option. Order at least one per project to program and control.



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Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT
Catalog Number:

TRP30L-4K-035-4-U-BL-SCP

Type:**L5**

Notes:

SLA14-27041

PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 67 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
				LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G
30	350mA	34w	2	3549	104	1	0	2	3161	93	1	0	1	2404	71	1	0	1
			3	3583	105	1	0	2	3191	94	1	0	1	2443	72	1	0	1
			4	3459	102	1	0	2	3081	91	1	0	1	2375	70	1	0	1
			2	4935	93	1	0	2	4466	84	1	0	2	3420	65	1	0	1
	525mA	53w	3	5062	96	1	0	2	4508	85	1	0	2	3452	65	1	0	2
			4	4887	92	1	0	2	4353	82	1	0	2	3352	63	1	0	2

Lumen values are from photometric tests performed at a NVLAP certified laboratory in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment, application and performance tolerances of the electrical components.

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
30	1	350mA	120	34	0.29
			277	34	0.12
		525mA	120	53	0.45
			277	53	0.18

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0° C	1.02
10° C	1.01
20° C	1.00
25° C	1.00
30° C	1.00
40° C	0.99
50° C	0.98

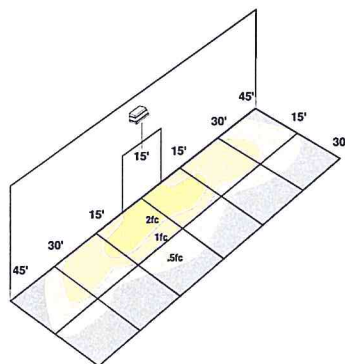
Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

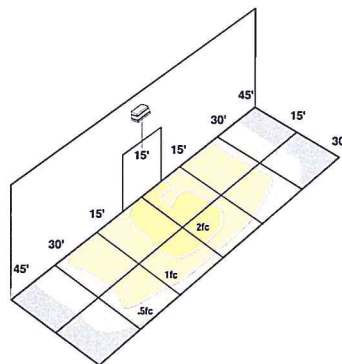
Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	60,000	100,000	
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>774,000
40°C / 104°F	0.99	0.96	0.95	0.95	0.93	>625,000

1 Nichia 2198, 700mA, 85°C Ts, 10,000hrs

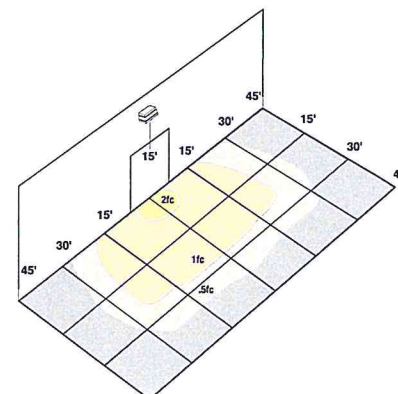
Data references the extrapolated performance projections for the TRP base model in 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

PHOTOMETRIC REPORTS

TYPE II



TYPE III



TYPE IV (Forward throw)



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TRP-SPEC 9/14

Submitted by Swaney Lighting Associates

**Job Name:**

Grove St Appartments - Burl VT

Catalog Number:

2-CAP-21-24NB-27-4K-T4-UNV-

3RNB-BBT

Notes:

Type:

2L1-4

SLA14-27041

**BEACON**

design . performance . technology

www.beaconproducts.com

Type:

Project Name:

Notes:

DEPARTMENT OF
PLANNING & ZONING

rev. 03.14.2014

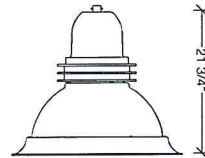
URBAN (LED)

Urban LED Luminaires

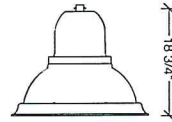
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNB	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

CAP - Round Shade

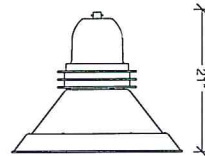


26" - CAP
Shown with optional 3RNB rings
EPA: 1.39 ft²
40 lbs

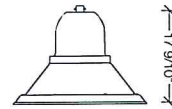


21" - CAP
EPA: 1.04 ft²
35 lbs

MRDS - Deep Shade

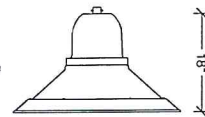


26" - MRDS
Shown with optional 3RNB rings
EPA: 1.25 ft²
40 lbs



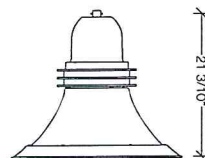
21" - MRDS
EPA: 1.00 ft²
35 lbs

MRSS - Shallow Shade

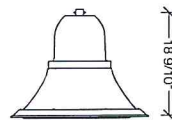


26" - MRSS
EPA: 1.17 ft²
40 lbs

MAR - Curved Shade



26" - MAR
Shown with optional 3RNB rings
EPA: 1.25 ft²
40 lbs



21" - MAR
EPA: 1.00 ft²
35 lbs

A. MODEL**CAP-21** 21" Capitol (2 Fixtures)

MRDS-21 21" Miramar deep shade

MAR-21 21" Maritas

CAP-26 26" Capitol

MRSS-26 26" Miramar shallow shade

MRDS-26 26" Miramar deep shade

MAR-26 26" Maritas

B. ENGINE-WATTS**24NB-27** 27 Watts - LED array

24NB-55 55 Watts - LED array

36NB-80 80 Watts - LED array

48NB-110 110 Watts - LED array¹60NB-136 136 Watts - LED array¹

3 = 26" Urban only

C. CCT - COLOR TEMP**3K** 3000K**4K** 4000K

5K 5000K (std.)

D. OPTICS

T2 type II

T3 type III

T4 type IV

T5R type V, rectangular

T5QM type V, square medium

T5W type V, round wide

E. VOLTAGE**UNV** 120-277V

347 347V

480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button

2PF dual power feed ^{1,2}**G. STYLE OPTIONS**

NRNW no rings

3RNB three cast rings**H. COLOR****BBT** basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

Catalog Number:

2-CAP-21-24NB-27-4K-T4-UNV-
3RNW-BBT

Notes:

Type:

2L1-4

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URBAN (LED)
Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to -component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
AA44-S-4-C-P-BBT

Notes:

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Type:

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SLA14-27041

rev. 02.24.2014

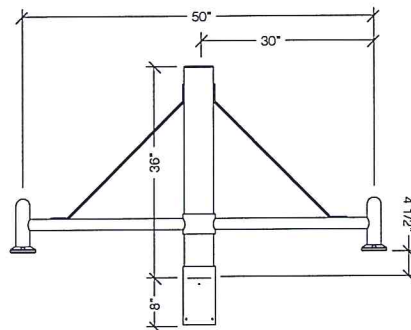
AA-44 STRUT
Arms

BEACON
design . performance . technology
www.beaconproducts.com

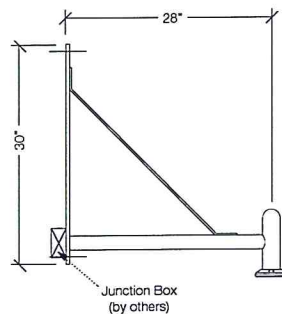
 Type:
Project Name:
Notes:

 Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

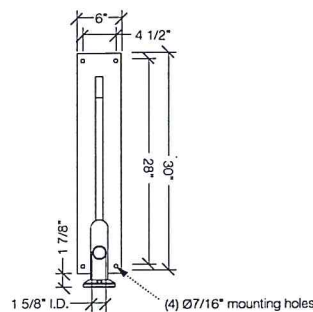
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT

C see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

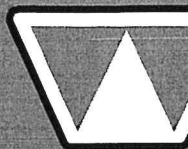
Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	wall	weight	12	-	-	-	-	-	-	-	-
	Ø4"	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	Ø5"	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	Ø6"	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.70	4.70
	weight	-	21	26	28	26	31	33	31	36	38

WOODFORD

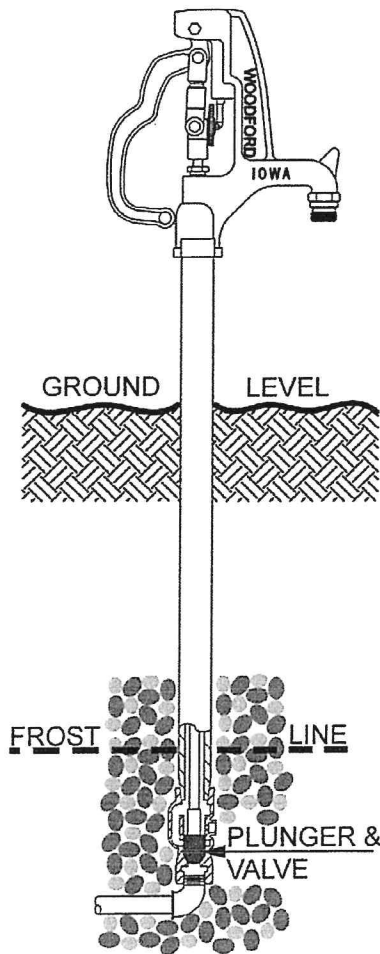


How a Freeze Proof Hydrant Works

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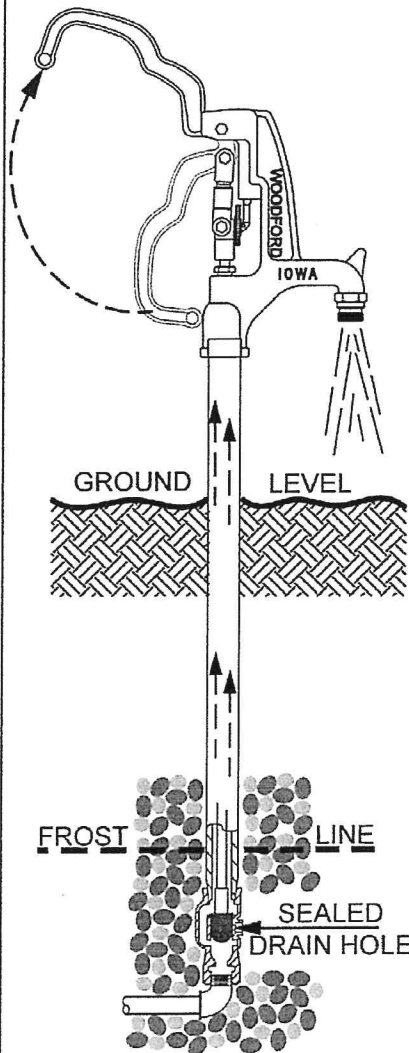
CLOSED

When the hydrant is closed, no water is in the riser pipe or head. The plunger stops water below the frost line where freezing can not occur.



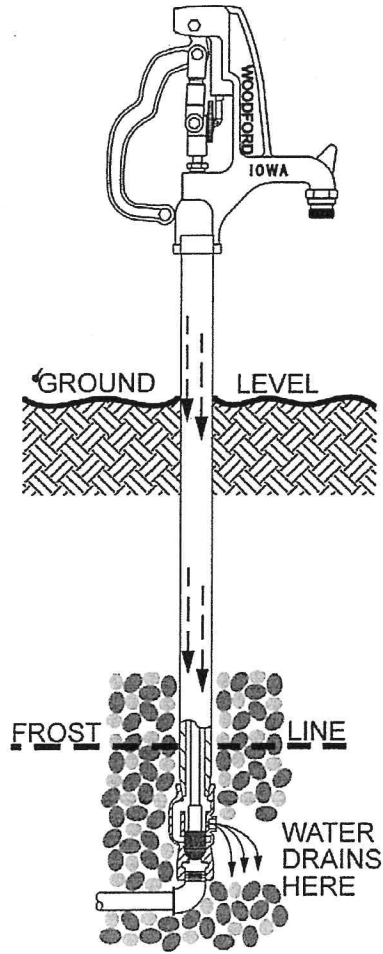
OPEN - WATER FLOWING

Water flows when the handle is raised. The plunger is lifted allowing water to flow while sealing the drain hole.



CLOSED - DRAINING

Closing the handle pushes the plunger down to shut off the water and open the drain hole. This allows the water in the head and riser pipe to drain into the gravel bed. The hydrant is now empty and cannot freeze.



For more information contact...

WOODFORD MANUFACTURING COMPANY

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

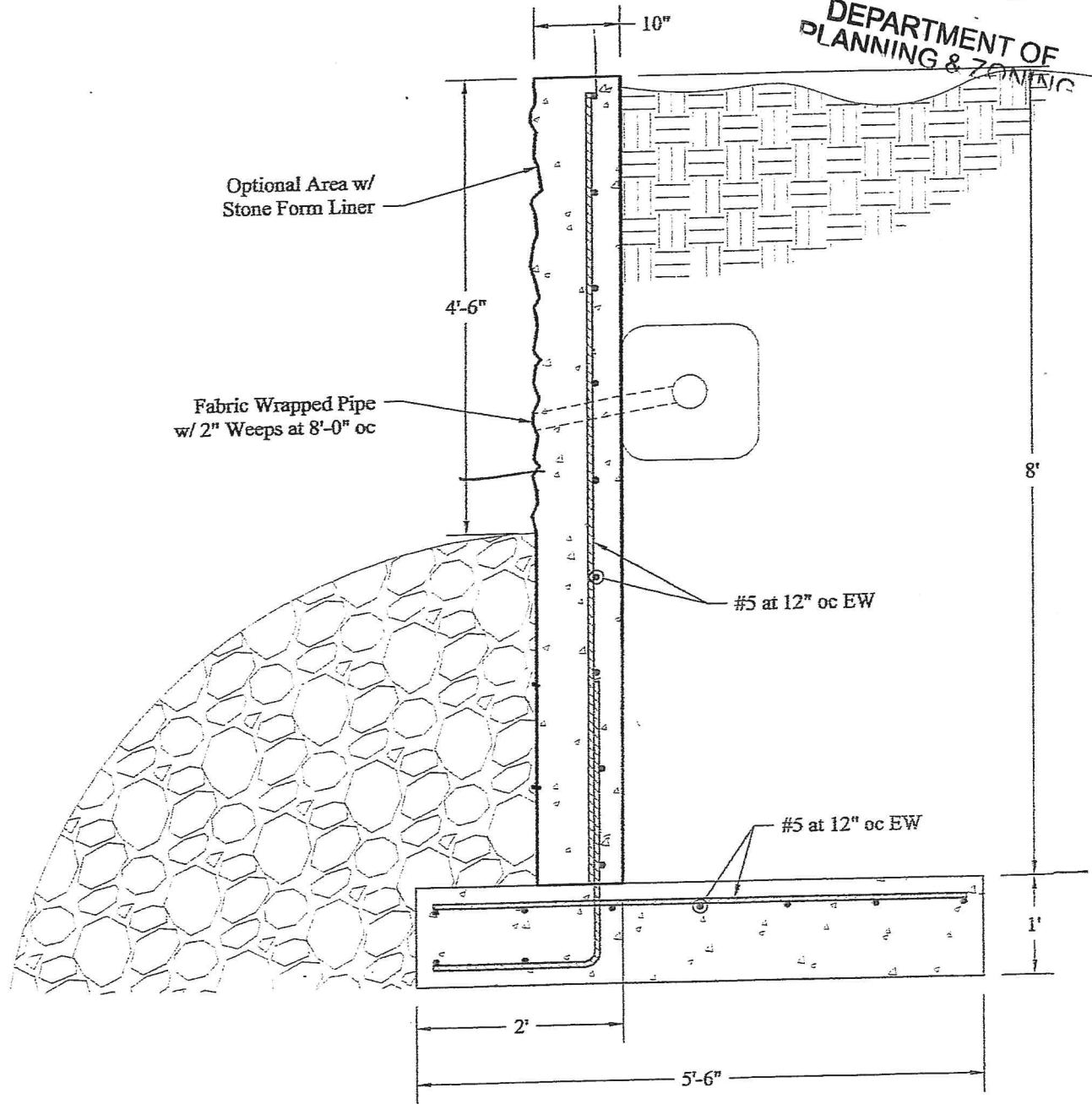
To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

A Division of WCM Industries, Inc.

CROSS SECTION FOR A "Form Lined" Wall.

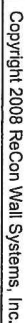
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PLANNING & ZONING



Retaining Wall Section (Typical)

Grades Street Appointments



Design is for internal stability of the RECON wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to RECON's specification for this project.

Disclaimer: This drawing was prepared by ReCon Wall Systems, Inc. and to the best of our knowledge, accurately represents the product use in the application that is illustrated. This drawing is for conceptual, instructional, and estimating purposes only. Anyone making use of this drawing does so at their own risk and assumes all liability for such use. Final design for construction purposes must be done by a registered professional engineer who is familiar with the product and who has taken into account the specific site conditions.



DRAWING # 102

**TYPICAL GRAVITY WALL
CROSS SECTION**

RECON WALL SYSTEMS, INC
7600 WEST 27TH STREET, #229
ST LOUIS PARK, MN 55426
PH: 952-922-0027
www.reconwalls.com

Parks + Rec

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Tuesday, March 24, 2015 12:22 PM
To: Deryk Roach; Warren Spinner
Cc: Jesse Bridges; Jen Francis; Scott Gustin; Bryan Currier; Laura Wheelock
Subject: RE: 140 Grove St

Deryk, got it, thank you.

Patrick

From: Deryk Roach [mailto:droach@burlingtonvt.gov]
Sent: Tuesday, March 24, 2015 10:20 AM
To: Patrick O'Brien; Warren Spinner
Cc: Jesse Bridges; Jen Francis; Scott Gustin; Bryan Currier; Laura Wheelock
Subject: RE: 140 Grove St

Patrick, regarding the seed – you can share the spec with whomever you like to get a better price. The ratio of tall fescue, bluegrass, perennial ryegrass and the percent weed seed/inert matter is what we care about – not necessarily the varieties.

Deryk

From: Patrick O'Brien [mailto:pobrien@SDIRELAND.COM]
Sent: Tuesday, March 24, 2015 8:40 AM
To: Warren Spinner
Cc: Jesse Bridges; Deryk Roach; Jen Francis; Scott Gustin; Bryan Currier; Laura Wheelock
Subject: RE: 140 Grove St

Warren, thank you for checking in. We are ready and willing to make the changes but as discussed at the meeting, we are awaiting Laura's draft letter to proceed. I have asked her a few times for them and yesterday she said she hopes to have that very soon. She said something had come up that she had to prioritize. As discussed at the meeting, if the requests are clear and concise than I was going to run it by Scott Gustin to see if he wanted the changes made prior to if they were clear enough to be made conditions of approval. With that said, it would help a great deal if you could put together a clear letter or clearer e-mail outlining the changes we talked about. I don't think your email is not clear and concise. I have learned that Planning and Zoning likes it is best if the list of changes comes directly from City staff rather than the applicant because some (other) applicants may choose to leave a few things out. The only other way to do this would be to have myself or Bryan pen a clear letter and then get you all to sign off on it and then review that with Scott G. to see if changing the plans is necessary or if it could be made conditions.

I just checked my old email account and saw Jen's email with the lighting spec's and have forwarded them to Bryan and yes we have the ridiculously expensive grass seed mixture specs (sorry Deryk).

Lastly, it would be great if one of you could come to the meeting on the 21st. There are several folks in the neighborhood who think that DPW and P&R have not had any input on this project and that you are just letting us do what we want....which we all know is the furthest thing from the truth. I have told them that you all have been a pain in the ass but they don't believe me. Ok, so I am kind of joking with you all being a pain in the ass but surely you have not simply stood on the sideline and accepted everything we have proposed. The DRB needs to know that because these folks will be at the DRB meeting and they are going to throw your departments under the bus.

Scott, in regards to making changes, you mentioned that I would only need one set. As you know the set is @ 70 sheets. Would I only need to submit the sheets that were changed? Also, the requested changes we are talking about are all very minor.

Thank you all very much,

Patrick

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]

Sent: Tuesday, March 24, 2015 8:07 AM

To: Patrick O'Brien

Cc: Jesse Bridges; Deryk Roach; Jen Francis; Scott Gustin

Subject: 140 Grove St

Hi Patrick,

Planning and Zoning is asking us for final comments on the 140 Grove St project. This is in preparation for the April 2015 DRB Meeting.

Do you have an updated plan that shows our suggested changes from our meeting 2 weeks ago with Laura Wheelock (DPW) Jen Francis and myself?

We discussed changes on plan sheet S8 to the parking lot area and adjustments to the pedestrian path and crossing the parking lot. Jen provided details and specifications for the Parking lot lights that need to be included in the plans. I also provided grass seed mix specifications to be included on plan sheet S15.

We would like to see that our comments have been added to the development plans. Please let me know if you have any questions.

Thanks, Warren



Warren Spinner, Certified Arborist

City Arborist

Burlington Parks, Recreation & Waterfront

645 Pine Street

Burlington, VT 05401

802-862-8245



@BTVparks

Wetlands

Gilman & Briggs Environmental, Inc.

1 Conti Circle, Suite 5

Barre, Vermont 05641

Tel: (802) 479-7480; FAX: (802) 476-5610

gbenvironmental@earthlink.net

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DEPARTMENT OF
PLANNING & ZONING

22 January 2014

Patrick O'Brien
Patrick O'Brien Development LLC
200 Old Farm Road
South Burlington, VT 05403

Subject: Grove Street Wetlands

Dear Patrick,

This is to summarize my findings regarding wetlands at the site of the proposed Grove Street Apartments, and their relevance to the Burlington Comprehensive Development Ordinance. There are five wetlands on or near the proposed site of the Grove Street Apartments – two associated with Centennial Brook and near or three adjacent to the Winooski River.

These wetlands were delineated in August 2014, using methodology found in the 1987 US Army Corps of Engineers Wetland Delineation Manual and 2009 Regional Supplement, as required by the Vermont Wetland Rules, and surveyed/mapped by O'Leary-Burke Civil Associates.

Wetland A is a riparian wetland that has formed in an area where the bank of Centennial Brook has slumped, allowing wetland vegetation such as sensitive fern and glossy buckthorn to become established. The 100-foot buffer zone around this wetland extends into the area around proposed Building F and its parking garage entrance ramp, but calculations indicate that impervious acreage in this buffer zone will be reduced by 0.23 acres (from 0.32 (existing) to 0.09 (proposed)).

- a. **Water storage for floodwater and stormwater:** Not applicable; this wetland has no capacity to store water.
- b. **Erosion and sediment control through binding and stabilizing the soil or shoreline:** Not applicable; this wetland is on unstable ground and as such does not contribute to erosion or sediment control.
- c. **Surface and groundwater protection, including sediment and toxicant retention, nutrient retention or transformation, and groundwater discharge or recharge:** Although under existing conditions this wetland may receive runoff from industrial activity upslope, it is not of a size or wetland type that might perform this function.
- d. **Fisheries habitat:** Not applicable.
- e. **Wildlife habitat:** Not applicable; although the wetland lies in a travel corridor along Centennial Brook, the fact that it is a wetland is irrelevant to this function.
- f. **Example of natural community types that are exemplary, rare or make an important contribution to the natural heritage of Burlington and Vermont:** Not applicable.

Patrick O'Brien

22 January 2014

Page 2

- g. **Habitat for rare, threatened or endangered species:** Not applicable.
- h. **Education and research in natural sciences:** Not applicable.
- i. **Recreation and economic benefits:** Not applicable.
- j. **Open space and aesthetics:** Not applicable.

Wetland B is another riparian wetland at the mouth of Centennial Brook, well away from any proposed activity regarding this project.

Wetland C is on the floodplain of the Winooski River, dominated with silver maple and box elder over ostrich fern, sensitive fern, reed canary-grass, and jewelweed. All proposed development lies outside the 100-foot buffer zone of this wetland.

- a. **Water storage for floodwater and stormwater:** Although this wetland is in the Winooski River floodplain, it does not significantly contribute to this function because of its size.
- b. **Erosion and sediment control through binding and stabilizing the soil or shoreline:** While this wetland is adjacent to the Winooski River, it provides no more erosion or sediment control than "upland" shorelines nearby.
- c. **Surface and groundwater protection, including sediment and toxicant retention, nutrient retention or transformation, and groundwater discharge or recharge:** Because it is in a depositional area, during flood events this wetland likely intercepts and retains sediments carried by the river.
- d. **Fisheries habitat:** This wetland lies well above the normal river level and therefore does not contribute to this function.
- e. **Wildlife habitat:** The wetland lies in an area that serves as a wildlife corridor along the river. There is evidence of use by otter and beaver along this part of the river.
- f. **Example of natural community types that are exemplary, rare or make an important contribution to the natural heritage of Burlington and Vermont:** Not applicable; although mapped in the Vermont Natural Resource Atlas as an S3 (uncommon) high quality Silver Maple-Ostrich Fern Riverine Floodplain Forest, this wetland does not have the characteristics of that community.
- g. **Habitat for rare, threatened or endangered species:** Not applicable.
- h. **Education and research in natural sciences:** Not applicable.
- i. **Recreation and economic benefits:** Not applicable.
- j. **Open space and aesthetics:** Not applicable, based on its size.

Wetland D is a depression on the terrace above the river bank. Dominant vegetation includes reed canary-grass, grass-leaved goldenrod, purple loosestrife, jewelweed, riverbank grape, and groundnut under a canopy of box elder. All proposed development lies outside the 100-foot buffer zone of this

wetland except for a split rail fence to be installed at the request of the Burlington Conservation Committee.

- a. **Water storage for floodwater and stormwater:** Although this wetland is in the Winooski River floodplain, but because of its small size, it does not significantly contribute to this function.
- b. **Erosion and sediment control through binding and stabilizing the soil or shoreline:** While this wetland is adjacent to the Winooski River, it provides no more erosion or sediment control than "upland" shorelines nearby.
- c. **Surface and groundwater protection, including sediment and toxicant retention, nutrient retention or transformation, and groundwater discharge or recharge:** Because it is in a depositional area, during flood events this wetland likely intercepts and retains sediments carried by the river.
- d. **Fisheries habitat:** This wetland lies well above the normal river level and therefore does not contribute to this function.
- e. **Wildlife habitat:** The wetland lies in an area that serves as a wildlife corridor along the river. There is evidence of use by otter and beaver along this part of the river.
- f. **Example of natural community types that are exemplary, rare or make an important contribution to the natural heritage of Burlington and Vermont:** Not applicable; although mapped in the Vermont Natural Resource Atlas as an S3 (uncommon) high quality Silver Maple-Ostrich Fern Riverine Floodplain Forest, this wetland does not have the characteristics of that community.
- g. **Habitat for rare, threatened or endangered species:** Not applicable.
- h. **Education and research in natural sciences:** Not applicable.
- i. **Recreation and economic benefits:** Not applicable.
- j. **Open space and aesthetics:** Not applicable, based on its size.

Wetland E is a large floodplain forest upstream (to the east) of the proposed development, extending into South Burlington. Although this wetland is entirely off the subject property, the 100-foot buffer extends as far as proposed Building B and its parking lot. Proposed impervious acreage within this buffer zone will be 0.02 acres, which represents a 0.12 acre reduction from the existing 0.14 acres.

- a. **Water storage for floodwater and stormwater:** This wetland is the first significant floodplain area on the Winooski as it enters Burlington, and because of its location on the outside of a river bend, very likely intercepts, slows and stores floodwaters.
- b. **Erosion and sediment control through binding and stabilizing the soil or shoreline:** This wetland receives the full force of the river during high water events, and is able to withstand erosive forces by absorbing and ameliorating currents in its dense vegetation.

- c. **Surface and groundwater protection, including sediment and toxicant retention, nutrient retention or transformation, and groundwater discharge or recharge:** Because it is in a depositional area on the outside of broad bend in the river, this wetland intercepts and retains sediments and detritus. There is evidence that material that is washed downstream is carried far into this wetland during high water events.
- d. **Fisheries habitat:** This wetland likely provides fisheries habitat during high water events when it is flooded.
- e. **Wildlife habitat:** The wetland lies in an area that serves as a wildlife corridor along the river. There is evidence of use by otter and beaver along this part of the river. In addition, in combination with Centennial Woods, it is an important part of a 200+ acre wooded section of the city that provides habitat for a diverse wildlife community.
- f. **Example of natural community types that are exemplary, rare or make an important contribution to the natural heritage of Burlington and Vermont:** This wetland comprises about 13 acres, and in combination with wetlands across the river, constitutes a significant wetland complex. This wetland is classified as an S3 (uncommon) but high quality Silver Maple-Ostrich Fern Riverine Floodplain Forest.
- g. **Habitat for rare, threatened or endangered species:** Not applicable.
- h. **Education and research in natural sciences:** Not applicable.
- i. **Recreation and economic benefits:** Not applicable.
- j. **Open space and aesthetics:** The wetland is visible from the river and from the southbound Interstate 89 Bridge, and although it is perceived as forest rather than wetland, it represents an aesthetic natural community in an otherwise urban environment.

Summary

The buffer zones of two wetlands on or near the property extend into areas proposed for development: a small slump area on the bank of Centennial Brook and a large floodplain forest to the east. The first of these wetlands performs no functions at a significant level, but the second, larger one is significant for water storage for floodwater, erosion and sediment control, surface and groundwater protection, wildlife habitat, exemplary natural community, and open space and aesthetics. This wetland is shown on the Vermont Natural Resources Atlas as covering over 19 acres, but the on-site delineation shows that it does not extend as far downstream as shown on the Atlas and probably measures about 13 acres.

The proposed project will have no direct impacts on jurisdictional wetlands, but will impinge on wetland buffer areas in two places:

1. Near Wetland A (on Centennial Brook) where proposed actions will impact 0.09 acres, but will result in a reduction of 0.35 acres of impervious surface, and
2. Near Wetland E (the large wetland) where proposed actions will impact 0.12 acres.

Patrick O'Brien
22 January 2014
Page 5

Because there will be a reduction in the amount of impervious surface area, and because stormwater treatment and erosion control measures will be employed, neither of these two impact areas will negatively affect the wetlands and their protected functions.

Sincerely,

A handwritten signature in black ink, appearing to read "Errol Briggs", with a stylized flourish at the end.

Errol C. Briggs

Inclusionary

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Monday, April 13, 2015 9:04 AM
To: Scott Gustin; Brian Pine
Subject: Inclusionary
Attachments: Grove St 140 (2) Prel plat approval.doc; Construction phasing plan.pdf

Hello Scott, I was worried about this all weekend and so I thought I should review everything this morning to make sure that I am on proper footing heading into the upcoming board meeting, with that, I offer the following:

Condition 8 of the Preliminary Approval states:

Prior to final plat application, a revised project phasing schedule shall be provided that clearly depicts what will be constructed and when it will be constructed. The phasing schedule shall be consistent with the inclusionary housing requirements of Sections 9.1.18 & 9.1.19 of the CDO. If the inclusionary housing units are to be contained within a single building as presently proposed, the inclusionary housing units must be constructed first. Written acceptance of the proposed inclusionary housing shall be obtained from the city's Housing Trust Fund. The phasing schedule must also provide for the duplex housing units to be built early during the project construction.

Section 9.1.18 & 9.1.19 read as follows:

Sec. 9.1.18 DRB Review of Proposal for Phasing

Proposals for projects to be constructed in phases shall be reviewed as a component of the initial project review and shall be included in DRB conditions of approval. A schedule setting forth the phasing of the total number of units in a covered project,

along with a schedule setting forth the phasing of the required inclusionary unit(s), shall be presented to the DRB for review and approval as part of the permitting process, for any development subject to the provisions of this article. If phasing is

not included as part of the review process, no phasing of the inclusionary units shall be allowed.

If a covered project is approved to be constructed in phases, the requirements of the following section shall be applicable to each such phase.

Sec. 9.1.19 Timeline for Availability/Phasing of Inclusionary

Units for Issuance of Certificate of Occupancy

Inclusionary units shall be made available for occupancy on approximately the same schedule as a covered project's market units, except that certificates of occupancy for the last ten percent (10%) of the market units shall be withheld until certificates of occupancy have been issued for all of the inclusionary units; except that with respect to covered projects to be constructed in phases, certificates of occupancy may be issued on a phased basis consistent with the conditions of approval set forth by the DRB in Sec. 9.1.18.

I also think that it is important to understand Section 9.1.7, which states:

Sec. 9.1.7 Certificate of Inclusionary Housing Compliance

Notwithstanding any other provision of this ordinance, no certificate of occupancy for a project covered by this chapter shall be granted unless and until a Certificate of Inclusionary Housing Compliance has been issued by the Manager of the city's

Housing Trust Fund.

In regards to breaking this down to determine if I need to submit anything to you I am going to take the safe route and explain how we are meeting these sections as well as the DRB's Preliminary Condition. First, it is important to note that at this point we do not plan on having all of the IZ units in 1 building, rather they will be interspersed around the project but initially they will be made available at the same time as the market rate ones become available. In other words, we are proposing 232 units, 15% of which (35) will be made available at the same time as the first 35 market rate rentals. In the event that all of the Inclusionary Units are in the same building, that building will come on line first and our phasing plan would be adjusted accordingly.

1. We have submitted a project phasing schedule (see attached) with our Final Application that clearly depicts what we will be building and the anticipated sequence and timeline.
2. Assuming the Final Condition of Approval relating to Section 9 will mirror the Preliminary Approval, one can therefore see that we are proposing to construct the phase 1A (three duplex buildings) and 1B (22 unit building) at the same time and we are also proposing that they become available to renters at the same time. That means, that at the end of Phase 1A and 1B, 28 units will be occupied and 14 of those will be Inclusionary. The next two phases (2A & 2B) consist of 39 total units and 20 of those will be Inclusionary which will bring the total to 34. The next phase (3A) is 21 units, so as soon as the Phase 3A building becomes available for occupancy 10 of the first 20 units will be Inclusionary. At that point, the inclusionary requirement for timing of occupancy and required # of units will be met.

Please let me know if this clarifies how we propose to meet the above listed requirements.

Lastly, it would be nice if the timing condition could be amended to read that the last 50% of the Inclusionary Units must be offered prior to the 200th unit being occupied.

Thank you,

Patrick

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

Scott Gustin

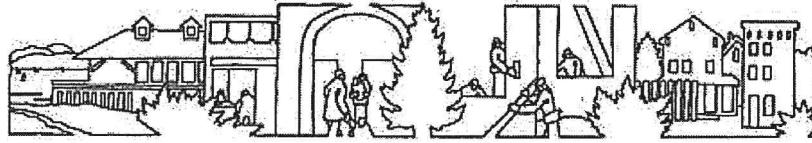
From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Tuesday, April 14, 2015 1:12 PM
To: Scott Gustin
Subject: FW: Inclusionary
Attachments: Grove St 140 (2) Prel plat approval.doc; Construction phasing plan.pdf

Scott, I just received your message and question. This is what I meant and here is the reasoning behind the statement

It would be best if one of the non profits own the inclusionary units, I don't think anyone would argue that point. It is also pretty easy math to determine that the rental or sale of inclusionary units is a losing (\$) proposition due to the combination of soft and hard costs of the units. Our preliminary approval gives us two options, the first is to construct a building that would house all (or most) of the inclusionary units but if we do it that way, that building needs to be first. If you work that into the financial proforma, the lenders won't touch the project, they all say that from a financial standpoint the Inclusionary units should be built in the second half of the project. We have explained to all of them our requirements and hence our reasoning to go with our second option which is to incorporate them into the first 70 units. That we built on a 1:1 ratio (for each Inclusionary built we get a market rate unit). While the lenders still see this as a losing proposition, it is our only option unless we ask the DRB to amend that condition to say that the second half of the inclusionary units need to be built before the 200th c.o. is obtained. My sentence regarding putting them in one building simply states that if something arises and we find a way to build most of the inclusionary units in one building, then we would have to change @ our phasing plan accordingly. For example, we could start phase 2B (33 units) at the same time we start phase 1A and 1B. We would just have to make sure that the 33 units in phase 2B and one of the duplex's in phase 1A were occupied first under and were Inclusionary.

Clear as mud?

Patrick



COMMUNITY & ECONOMIC DEVELOPMENT OFFICE

ROOM 32 • CITY HALL • BURLINGTON, VERMONT 05401
(802) 865-7144 • (802) 865-7142 (TTY) • (802) 865-7024 (FAX)

TO: Scott Gustin, Senior Planner
FROM: Brian Pine *B.P.* Housing Consultant
DATE: April 13, 2015
RE: Certificate of inclusionary housing compliance for 140 Grove St.
(SD Ireland property)

I am writing to certify that this project is in compliance with the requirements of Article 9, Inclusionary Zoning (IZ), and, upon final completion, will be eligible for a partial waiver of impact fees per the City of Burlington Impact Fee Administrative Regulations.

The Owner will execute standard Housing Subsidy Covenants, which are subject to final review and approval by CEDO, to restrict both the initial rental price and the ongoing price on 15% of the planned 232 units - 35 units. In order to ensure an adequate distribution of IZ units by household size, the bedroom mix of the IZ units shall be the same ratio as the bedroom mix of the market rate units. The Housing Subsidy Covenant that will be executed for each of these units will ensure the initial affordability of the 35 required inclusionary units and shall preserve the affordability of these units through rent restrictions for 99 years.

Due to the affordability of the 35 IZ units, the project meets the requirements for a partial waiver of impact fees. With the 35 IZ units being perpetually affordable to households with incomes at or below 75% Area Median Income, this project is entitled to a 50% impact fee waiver on the gross floor area of those 35 units. The precise amount of the impact fee waiver will be calculated when the applicant is required to submit payment.

Please contact me if you have any questions about the information in this memo.



Office of Engineering
645 Pine Street, Suite A
Burlington, VT 05402
802.863.9094 P
802.863.0466 F
802.863.0450 TTY
<http://www.burlingtonvt.gov/DPW/>

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Norman Baldwin, P.E.
CITY ENGINEER

Memo

Date: April 9, 2015
To: City of Burlington Planning & Zoning
Patrick O'Brien – SD Ireland
From: Laura Wheelock P.E.
Public Works Engineer
Subject: SD Ireland Grove Street Development

RECEIVED
APR 10 2015
DEPARTMENT OF
PLANNING & ZONING

This memo is to certify the review of the work being proposed within the right-of-way for the above mentioned development/project. The review and comments are based on the 100% plan set as received February 18, 2015.

As reviewed by the Department of Public Works (DPW) we find the following:

1. The proposed improvements including but not limited to new sidewalk throughout the project area meets City Standards.
2. Improvements at the pedestrian crossings of Grove Street in the vicinity of the park and crossing north of the park as shown on the 100% plans are acceptable with signage, RRFBs, and bumpout for northern crossing.
3. DPW has reviewed the traffic plan with update provided 3/25/15 and recommendations. DPW has no further comments and accept the recommendations in the study.
4. At the north end of Grove Street the traffic study recommended moving the no parking here to corner sign 25'-0" to the south. The developer will be required to submit a traffic request to DPW for this recommendation which will need to be reviewed and approved by the DPW commission. DPW does not required approval of this recommendation prior to initiation of the project as it was only a recommendation of the study and not a requirement. DPW will require the developer to at least make the request.

April 9, 2015

RE: SD Ireland Grove Street Development

5. Clarifications to be made to the plans include:
 - a. Updating the crosswalk marking to match City Standard – This will be a 24" Paint with 24" clear space block pattern.
 - b. Updating the Car Parking and Roadway Area Detail to Match City Standard – This will be 3" of Asphalt, with 4-6" Fine Graded Crushed Stone, with 12" Dense Graded Crushed Stone. Typical Asphalt courses are 1" of Type IV over 2" of Type III.
 - c. Widening of the crosswalk ramps at the crosswalk at the park to be 6'-0", widening should happen to the south side of the crosswalk shown in the plans.
 - d. At the crosswalk from the parking lot to the park on the west side of the road, at minimum one tree should be removed to improve the alignment of the park path with the proposed sidewalk.
 - e. In the dividing island between Grove Street and the parking lot adjacent to the sidewalk DPW and Parks have asked that a permeable paver either open and filled with pea stone or closed and permeable be used in place of any vegetation. This treatment should also be considered in the narrow wedge that is created on the west side of the road between the proposed sidewalk and the new path leading into the Park.
 - f. The proposed sidewalk where the vehicle will cross the sidewalk should be constructed with an 8" thick section to meet DPW's standard at commercial drives. This includes, but is not limited to the drives at:
 - i. Garden Street
 - ii. Parks vehicle access into Schmanska Park
 - g. At the southern end of the project DPW has asked that the crosswalk markings at the 284 Grove Street development be removed from the project; as painting those crossings does not meet the DPW warrant for painted crosswalk.
 - h. At the look out structure the curb cut shown for bicycle access should either be removed as we do not require it be provided, or have a tapered approach so it allows for proper bicycle movement and does not resemble a curb ramp typical to a crosswalk.
6. DPW has asked that property lines and ROW boundaries be added to the all the plan sheets to clarify the work that is occurring in the various areas.
7. DPW is concerned with the placement of stairs within the ROW at Units B and C. It is our preference that no stairs be placed within the ROW should that area be required in the future. DPW is asking the DAB and DRB take our concerns regarding the placement of permanent structures in the ROW into consideration and remove the requirement placed on the developer to provide these connections at this location.

April 9, 2015

RE: SD Ireland Grove Street Development

DPW is in favor of providing a single pedestrian connection from to the north of Unit D that would connect the development's sidewalk network directly to the sidewalk on the east side of Grove Street.

Should a connection out the back of the Units be remain as a requirement the stairs should either:

- a. be pulled back so they do not encroach on the ROW
- b. connect the sidewalk to the stairs at Unit A and D and eliminate the stairs out of the units

Should none of these alternatives be found acceptable the developer will be required to enter a license with the City for the infrastructure that exists in the ROW. The lease will have a 10 year renewal with a 6 month revocation period should DPW require use of the ROW in this location. The developer will also be required to fully maintain the infrastructure within the ROW. License agreements are subject to approval of the City Council who will either approve or reject the use of the ROW and the license.

If you have any questions please contact me directly at LWheelock@burlingtonvt.gov or 802-540-0397.

RECEIVED
MAR 05 2015

DEPARTMENT OF
PLANNING & ZONING
P.O. Box 849
BURLINGTON, VT
05402
(802) 863-9094 P
(802) 863-0466 F

Chapin Spencer
PUBLIC WORKS DIRECTOR

Norman J. Baldwin, P.E.
CITY ENGINEER



March 4, 2015

Patrick O'Brien
c/o S.D. Ireland Brothers Corporation
P.O. Box 2286
So. Burlington, VT 05407

Re: Water/Sewer Capacity for Garden Street Apartments at 100 Grove Street

Dear Mr. O'Brien,

This letter is to inform you, your client, the State of Vermont Environmental District and other interested parties that the City of Burlington's water and wastewater facilities have sufficient capacity to handle additional flows associated with a large residential project at the above address. Using the State Environmental Protection Rules, you have calculated the water and sewer demands to be 42,327 gpd (gals/day) and 39,092 gpd, respectively. Your calculations are provided on the next page.

Flow from this area is treated at our East Wastewater Plant on Riverside Avenue. It is important to note that this letter only addresses treatment plant and not distribution or collection system capacities. We have and are continuing to work with you and your client to address water supply and sewer collection system issues.

This letter is good for two (2) years from the date of writing. If this letter is not filed with the proper offices, or if the proper permits are not obtained within that year, you will need to reapply. Any changes in flow estimates or property usage also requires reapplication. Please feel free to call me at 865-7258 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Roy".

Steve Roy, P.E.
Project Engineer
Burlington Public Works



O'Leary-Burke Civil Associates, PLC

CIVIL ENGINEERING | REGULATORY AND PERMIT PREPARATION | LAND SURVEYING | CONSTRUCTION SERVICES | LAND USE PLANNING

February 24, 2015

RECEIVED

FEB 24 2015

DEPARTMENT OF
PLANNING & ZONING

Megan Moir
Stormwater Plangineer
Burlington Public Works Department
234 Penny Lane
Burlington, VT 05401

Re: Stormwater Discharge Plan
SD Ireland - 140 Grove Street
Burlington, VT 05401

Dear Megan:

We are writing on behalf of SD Ireland (c/o Scott Ireland) to request a letter of approval (in order to submit the project for final plat review) for the Stormwater design of the proposed development at 140 Grove Street, Burlington. A state individual stormwater discharge permit has already been authorized (4773-INDS).

1. Project Description

The project is called "Ireland Property - 140 Grove Street". The project will involve the decommissioning of the SD Ireland concrete batch plant at 140 Grove Street, Burlington and the construction of a new 232 unit residential development complex on the 20.79 acre site. The proposed use of the site will reduce the overall impervious surfaces by 3.59 acres from 10.21 acres to 6.62 acres (35% reduction). This includes connecting all of the impervious surface runoff to the impaired Centennial Brook watershed (currently 3.67 acres) to the proposed stormwater system during large storm events. The project will also include the removal of a 60ft long culvert along Centennial Brook located at the existing northern entrance to the concrete facility. The removal of the culvert is at the request of the Burlington Conservation Board.

The parcel is bound by several residential buildings across Centennial Brook, the Winooski River, Ethan Allen Park, and The University of Vermont. The parcel is currently the site of the SD Ireland concrete batch plant. All existing stormwater on the site generally flows directly to Centennial Brook/Winooski River or to an existing infiltration pond located along the eastern boundary of the site.

The Chittenden County Soil Survey classifies the on-site soils primarily as Fu - fill land and Le - limerick silt loam. The limerick silt loam soils are classified as a class C soil. Due to the nature of the sites current use the proposed development area soils are generally made up of coarse fill soils suitable for industrial activity. All of the on-site soils were modeled as HSG Class C soils for the HydroCAD analysis.

2. Existing Conditions

The parcel is currently being used as the SD Ireland concrete batch plant. The site varies in topography; 68% - slopes less than 0.15, 20% - slopes greater than 0.30, and 12% - slopes between 0.15 and 0.30. The on-site soils were modeled as HSG Class C soils for all HydroCAD analysis. The site currently has approximately 10.21 acres of impervious coverage.

3. Existing Stormwater System

There is an existing stormwater infiltration pond located along the eastern property boundary that is being used to collect the runoff for approximately 5.44 acres of the existing impervious surfaces. The remaining impervious surfaces drain off the site into Centennial Brook (3.67 acres) and the Winooski River (1.10 acres).

Watershed	Impervious Acres	Drainage Path
Centennial Brook	3.67	Overbank directly to Centennial
Winooski River	1.10	Overbank directly to Winooski
Winooski River	5.44	Existing Stormwater Infiltration Pond

Total: 10.21 acres

4. Receiving Water

The site is divided into six (6) sections based on specific combinations of the following criteria; Dis-Connected Impervious vs Connected Impervious, Original vs. Proposed Centennial Brook Watershed, and Original vs. Proposed Winooski River Watershed. The dis-connected impervious areas have been designed and modeled to show, at a minimum the 0.9" water quality storm (WQv) can be sufficiently stored without the use of any overflow structures connected to the system. This is done by the use of sheet flow and rain gardens to provide as much recharge back into the original watersheds as possible. When a storm event larger than the water quality storm of 0.9" takes place, the sites watershed boundary shifts towards being completely within the Winooski Watershed. The watershed boundary shifting is due to the utilization of the overflow devices by the infiltration features within the Centennial Brook Watershed.

Connectivity	Original Watershed	≤ WQv Storm Watershed	> WQv Storm Watershed	Acres
Disconnected	Centennial	Winooski	Winooski	0.06
Disconnected	Winooski	Winooski	Winooski	1.74
Disconnected	Winooski	Centennial	Centennial	0.34
Disconnected	Centennial	Centennial	Centennial	1.40
Connected	Centennial	Winooski	Winooski	0.88
Connected	Winooski	Winooski	Winooski	2.20

Total: 6.62

5. Proposed Stormwater System

The proposed stormwater system is comprised of a network of yard drains, rain gardens, grassed swales, and catch basins that all drain to the proposed upgraded detention pond (P-3), formally the infiltration pond, located along the eastern property boundary. All of the proposed 6.62 acres of impervious surfaces will be captured and treated by the new system with no direct runoff to Centennial Brook or the Winooski River. The detention pond (72,263 ft³) is designed with a sediment forebay (12,375 ft³) that is easily accessible for maintenance. The proposed stormwater design integrates flat areas with sheet flow and grassed swales to provide sustainable pretreatment/groundwater recharge wherever possible.

The following information summarizes the project:

- a. Project Site - Point of Interest 13.95 acres
6.62 acres of impervious
- b. The project was modeled as a cold water habitat.
- c. Demonstrate Compliance with each of the criteria:
 - i. Water Quality Treatment Standard

The Point of Interest is defined as follows:

S/N 001 - Contains all of the disturbed area associated with the project (6.62 acres of impervious) to estimate the Detention Pond (P-3) performance. The Water Quality standard is being met by containing 50% of the WQ_v event in a permanent pool at elevation 160' (elevation of 1.0" low flow orifice). The sediment forebay capacity exceeds 10% of the WQ_v event.

The following observations can be derived from the model:

Proposed Site

Drainage Area: 13.95 acres (607,688 SF)

Impervious: 6.62 acres (288,170 SF)

$WQ_v = 21,744 \text{ ft}^3$

50% WQ_v Permanent Pool Elevation: 160.0 ft (storage = 10,872 ft^3)

ii. Groundwater Recharge Treatment Standard

The recharge standard is met by using the percent area method to provide the adequate recharge necessary in order to preserve existing water table elevations. It should be noted that the project is reducing the amount of impervious surfaces on the site by 3.58 acres. Rooftop runoff from three of the large apartment buildings were modeled to show that the recharge standards are being met for class "C" soils. The grass channels were designed to meet the WQ_v standards in order to provide acceptable groundwater recharge.

$Re_a = (F)(A)(I)$

$Re_a = 0.67 \text{ acres}$

$F = .10$ (HSG Class C)

$A = 20.79 \text{ acres}$

$I = 32\%$

Recharged Impervious Coverage:

Grassed Channel #1 (O-3)

Area: 0.49 acres

Impervious: 0.29 acres

Swale Dimensions: 5' wide bottom x 1' deep channel x 170' long

10 minute residence time required: 13.9 min provided - met

Grassed Channel #2 (O-3)

Area: 0.35 acres

Impervious: 0.29 acres

Swale Dimensions: 5' wide bottom x 1' deep channel x 170' long

10 minute residence time required: 14.6 min provided - met

Grassed Channel #3 (O-3)

Area: 0.25 acres

Impervious: 0.20 acres

Swale Dimensions: 5' wide bottom x 1' deep channel x 120' long

10 minute residence time required: 11.4 min provided - met

$$Re_a = 0.78 \text{ acres } (0.29 \text{ acres } + 0.29 \text{ acres } + 0.20 \text{ acres}) > 0.67 \text{ acres}$$

Along with the grassed swales modeled here to show they meet the WQv standards the project utilizes multiple rain gardens, additional grassed swales, and sheet flow techniques for even further groundwater recharge.

iii. Channel Protection Standard (1-year)

The channel protection volume is met by the design of the retrofitted detention pond. The small low flow orifice was sized to most closely model a 720 min center of mass detention time for the 1-year storm.

The existing site currently has 10.21 acres of impervious coverage draining to three different locations; the Winooski River, Centennial Brook, and the existing infiltration pond on the site. The 3.67 acres of impervious flowing to Centennial Brook has a 1-year pre-development peak flow of 12.29 cfs. The 1.10 acres of impervious flowing directly to the Winooski River has a 1-year pre-development peak flow of 4.03 cfs. The 5.44 acres of impervious flowing to the existing infiltration pond does not currently have an outlet so its pre-development discharge is 0.00 cfs, see model. By taking a conservative approach to the pre-development flows; the post-development flows were compared to the pre-development runoff only to the Winooski River (4.03 cfs). This was done because the proposed post-development system will only discharge directly to the Winooski River in large storm events. This design method shows the proposed stormwater system will not exceed the peak flows previously discharged to the Winooski River. The following summary is derived from the HydroCAD model:

Detention Pond (P-3)

Predevelopment Flow	3.97 cfs
Post Development Flow	19.46 cfs
Routed Post Development Flow	0.36 cfs
Center of Mass Detention Time	742.30 min

iv. Overbank Flood Protection Standard (10-year)

The channel protection volume is met by the design of the retrofitted detention pond. The same predevelopment flow approach for the 10-yr overbank flood protection standard was used as the 1-yr standard. The following summary is derived from the HydroCAD model:

Detention Pond (P-3)

Predevelopment Flow	6.91 cfs
Post Development Flow	36.88 cfs
Routed Post Development Flow	2.86 cfs

v. Extreme Flood Protection Standard (QP100)

This criteria is not applicable since the new impervious coverage is less than 10 acres.

d. **Manner of Discharge:**

S/N 001: Stormwater runoff from roofs, driveways, parking areas, and sidewalks flows to a network of yard drains, rain gardens, grass channels, and catch basins where it is either infiltrated to the Centennial Brook watershed or routed to an extended wet detention pond discharging via controlled outlet structure to a wetland adjacent to the Winooski River.

Please find the following attachments for your review:

- USGS Map & Soils Map;
- Impervious Coverage and Breakdown;
- Pre-Development & Post-Development Flow Patterns;
- Electronic Version of HydroCad Model;
- Pertinent Plans Set;
- Annual Inspection Form;

We look forward to working with you on this project. If you have any questions or need additional information please let me know.

Sincerely,



Bryan Currier, E.I.

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Tuesday, February 24, 2015 3:24 PM
To: Scott Gustin
Cc: Bryan Currier; Steve Roy
Subject: FW: Grove Street Water/Sewer Review

Hello Scott, if you follow this email trail you will see that Steve Roy has a few minor requests and is ok having them be conditions of approval. What do you think?

His original comments are in black and our reply is in blue and his final comments are in red and those are the ones I am referring to.

Patrick

From: Bryan Currier [mailto:bcurrier@olearyburke.com]
Sent: Tuesday, February 24, 2015 3:21 PM
To: Patrick O'Brien
Subject: FW: Grove Street Water/Sewer Review

Patrick,

Steve Roy has submitted some minor revisions he would like us to correct on the water and sewer detail sheets. He said that he was alright with having the changes be made part of our conditions of approval for the final application, since we have already submitted to the City.

Thanks,
Bryan

From: Steve Roy [mailto:SRoy@burlingtonvt.gov]
Sent: Tuesday, February 24, 2015 3:10 PM
To: Bryan Currier
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: RE: Grove Street Water/Sewer Review

Sure. As long as it makes into the construction-ready set of drawings.

Steve

From: Bryan Currier [mailto:bcurrier@olearyburke.com]
Sent: Tuesday, February 24, 2015 3:08 PM
To: Steve Roy
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: RE: Grove Street Water/Sewer Review

Good Afternoon Steve,

Unfortunately, the plan set has already been submitted for Final Approval. Can we make these changes a condition of approval? We are expecting to have a few conditions from the board that are going to have to incorporate into the plans.

Let me know if you have any questions

Thanks,
Bryan

From: Steve Roy [<mailto:SRoy@burlingtonvt.gov>]
Sent: Tuesday, February 24, 2015 2:33 PM
To: Bryan Currier
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: FW: Grove Street Water/Sewer Review

Hi Bryan,

Sorry this took so long. My DRAFT comments below are in RED.

Thanks,
Steve

Steve Roy, PE
Burlington Public Works
53 Lavalley Lane
Burlington, VT 05401
T: 802.865.7258
F: 802.864.7653

From: Bryan Currier [<mailto:bcurrier@olearyburke.com>]
Sent: Thursday, January 15, 2015 9:10 AM
To: Steve Roy
Cc: Paul O'Leary; Guillermo Gomez; Norm Baldwin; Patrick O'Brien (pobrien@SDIRELAND.COM)
Subject: RE: Grove Street Water/Sewer Review

Good Morning Steve,

Please find below our responses below to the Burlington Public Works review of the water/sewer systems for the proposed 243 unit apartment complex at 140 Grove St.

Water Comments:

1. The Utility Plan (Sheet S3) calls for C900 pipe but the Water Detail (Sheet S16) has a DI pipe specification under PVC Pipe and DI fittings. Change S16 sheet to include the C900 DR14 (305 psi) PVC pipe spec and C907 for molded PVC fittings. Include tracer wire, tracer wire test stations (if valves are >500' apart) and magnetic warning tape stating "Caution – Buried Water Line Below" approximately 3' below grade. We use tracer wire and test stations from Copperhead Industries.

Sheet S16 – Water Details has been updated to include the C900 DR14 (305 psi) PVC pipe spec and C907 for molded PVC fittings. The typical water trench detail has been updated to include tracer wire from Copperhead Industries as well as warning tape. Tracer wire test stations were not required because the valves are <500' apart.

Sheet S16 still contains references to DI pipe in Section 1.2 and 1.8. Hydrant detail still shows DI pipe as well. Change thrust block on hydrant elbow to 2'x2'x3' precast.

2. Add/Move valves to have valves on each leg of a tee.

Sheet S3 – Utility Plan has been updated to have gate valves on each leg of the tees proposed with the new 8" C900 water main. OK, great.

3. Sprinklered building I needs a fire hydrant within 100' per NFPA 1.

Sheet S3 – Utility Plan has been updated to show a proposed hydrant within 100' of Building I. The hydrant is proposed to be located west of the building. OK, great.

4. Hydrant doesn't meet City specifications. I will send our detail sheet with this review sheet.
Sheet S16 – Water Details has been updated to have the hydrant detail meet City specifications.
Section 1.6 on fire hydrant does not include City requirements. We've worked with the local suppliers to develop a Kennedy "Burlington Spec" hydrant. Please just reference that.
5. Add mechanical restraint at all fittings in addition to thrust blocking.
Sheet S16 – Water Details has been updated to have the thrust block detail include mechanical restraint at all fittings.
Section 1.3 (incorrectly called 1.2) on Sheet S16 only references retainer glands on vertical bends and not everywhere you said above. Also PVC pipe requires a restraint specifically for PVC pipe. Reference Megalug 2000PV or equal.
6. See Burlington Water Details Sheet for valve specification.
Sheet S16 – Water Details has been updated with a valve specification that meets the city's standards.
As per our Detail Sheet all valves in Burlington are open right (clockwise). Please add to Section 1.4.
7. Agreements and easements are required for the off-site water line extension.
All of the agreements and easements have been obtained for the off-site water line extension. OK, great.
8. Even though our hydraulic model says the water main extension from Colchester Ave is sufficient, the cost of upsizing this main to 10" is negligible and would provide an added factor of safety.
The proposed water main (C900 PVC) will have an inner diameter of at least 8". Fine.
9. Consider elimination of dead ends by looping water mains around the site.
Due to the added expense and expected water pressures we are not proposing to loop the water mains around the site. Fine.

Sewer Comments:

1. DPW will take ownership, operation and maintenance of the proposed pump station if the following conditions are met:
It is our intent to have the City of Burlington take ownership, operation and maintenance of the proposed pump station. Fine.
 - a. The proposed Multitrode pump controller is replaced with our standard Siemens/Evoqua LC1 duplex pump controller with A1000 pressure transducer and backup float.
Sheet S14 – Pump Station Details has been updated to have the controls replaced with the city's standard controls with transducer and backup float. OK, great.
 - b. A Mission Communications M-800 Real Time monitoring system be installed and wired to temporarily disable the pump station when a signal is received from CSO manhole R1.12 on Colchester Avenue. With its built in digital and analog inputs, add wet well level, pump status/runtimes, high and low wet well alarms, and power failure.
Sheet S14 – Pump Station Details has been updated to include the real time monitoring system. OK, great.
 - c. The control panel include an auxiliary power hookup for a future generator purchase.
Sheet S14 – Pump Station Details has been updated to include auxiliary power hookups for a future generator. OK, great.
 - d. A pump is selected with the best possible total efficiency (pump plus motor). If the horsepower is greater than 5, then three phase power is required.
The pump is expected to be around 7.5 hp and will be required to have three phase power. OK.
 - e. The panel is UL listed.
Sheet S14 – Pump Station Details has been updated to have the panel be UL listed. OK, great.
 - f. An easement is drafted allowing city personnel to access the site for pump station and force main maintenance.
Sheet S3 – Utility Plan has been updated to show an access easement to the City for pump station and force main maintenance.
There's nothing found on S3 pertaining to this. Easement will need to be a separate, legal, document.
 - g. The access road to the station is expanded and paved for better access to the wet well, storage tanks and valve pit.
Sheet S3 – Utility Plan has been updated to show the access road being expanded and paved for better access to the station

In order to clean the wetwell and storage vaults the front end of our Vactor needs to be within 6' of the access manholes. Please make the necessary modifications to enable us to clean these structures.

- h. The force main material is changed from PVC to fusion-welded HDPE with an attached tracer wire that terminates in the valve pit and at a test station in the right-of-way near the existing sewer manhole. The force main design should address the relatively high coefficient of thermal expansion of HDPE.

Sheet S13 – Sewer Details has been updated to change the force main to fusion-welded HDPE with attached tracer wire. The test station in the right of way has also been included. The force main design has addressed the relatively high coefficient of thermal expansion of the HDPE pipe by burying the pipe at minimum 6' underground where the temperature fluctuation is minimal.

Provide specification on HDPE force main (i.e. SDR, IPS or DIPS).

- i. The force main out of the wet well remains as ductile iron until after the valve pit cross.

Sheet S14 – Pump Station Details has been updated to have the force main out of the wet well remains as ductile iron until after the valve pit cross. **OK, great.**

- j. The wet well bracket get moved up close to the access hatch.

Sheet S14 – Pump Station Details has been updated to have the wet well bracket moved up closer to the access hatch. **OK, great.**

- 2. Given this station's size and proximity to buildings S and T, consider adding an activated carbon vent pipe on the station wet well to reduce potential odors.

Sheet S14 – Pump Station Details has been updated to include an activated carbon vent pipe on the station wet well and storage tanks.

Provide specification.

- 3. This note is just a comment that the gravity sewer pipes seem quite deep. As seen in the review above we try and keep them in the 5' to 9' depth whenever possible.

Due to the topography of the site and the state separation requirements the sewers have been designed with a minimum depth of 6.61' and max depth of 13.21' with an average depth of 10.02'. **Fine.**

You had previously stated that Champlin Associates was the local rep the city uses for pumps and controls. Please see below the comments from Jon Champlin that have also been included on Sheet S14 – Pump Station Details.

Please let me know if you have any questions

Thanks,
Bryan

From: Bryan Currier
Sent: Tuesday, December 02, 2014 8:58 AM
To: 'Jonathan Champlin'
Cc: Paul O'Leary
Subject: RE: Grove Street Water/Sewer Review

Good Morning Jon,

Thank you very much for your comments. I have included the changes in the plans. We will not be requiring explosion proof pumps.

Thanks,
Bryan

From: Jonathan Champlin [<mailto:jon@champlinassociates.com>]
Sent: Monday, December 01, 2014 6:05 PM
To: Bryan Currier
Cc: Paul O'Leary
Subject: RE: Grove Street Water/Sewer Review

Hi Bryan-

Couple of notes:

Floats should be mechanical, mercury not allowed in the state.
Plan mentions intrinsically safe. Should the pumps be explosion proof as well?
Pump condition is looking to be a 7.5 HP so 3 phase power would be required by City.

Let me know if you have any questions.

Jon Champlin

From: Bryan Currier [<mailto:bcurrier@olearyburke.com>]
Sent: Monday, December 01, 2014 1:22 PM
To: Jon Champlin (jon@champlinassociates.com)
Cc: Paul O'Leary
Subject: Grove Street Water/Sewer Review

Good Afternoon Jon,

I am working on a 243 unit development project for SD Ireland located at 140 Grove St Burlington. We have submitted set of water/sewer plan to the City of Burlington Public Works and Steve Roy has given us his comments (see attached). He mentioned that Champlin Associates is the local rep they use for the pump station controls and pumps. Can you please take a quick look at the pump station designs (see attached) and let me know if you have any additional comments on the stations configuration.

Thanks,

Bryan Currier, EIT
O'Leary-Burke Civil Associates
1 Corporate Drive | Essex Jct., VT 05452
p: (802)878-9990
bcurrier@olearyburke.com

From: "Roy, Steve" <SRoy@burlingtonvt.gov>
To: pjobrien66@comcast.net
Cc: "Guillermo Gomez" <ggomez@burlingtonvt.gov>, "Norm Baldwin" <nbaldwin@burlingtonvt.gov>
Sent: Thursday, November 20, 2014 8:40:21 AM
Subject: Grove Street Water/Sewer Review

Hi Patrick,

Here are my comments on your development plans for water & sewer. Please forward to Paul O'Leary after you've had a chance to review, and let him know that Champlin Associates is the local rep for all the control stuff we use as well as pumps. I am happy to sit down with you folks to discuss further.

Traffic update

MEMO



TO: Patrick O'Brien
FROM: Ben Swanson
DATE: March 25, 2015
SUBJECT: Grove Street Development – Review of March 2015 Traffic Improvements

DEPARTMENT OF
PLANNING & ZONING

In October 2013, RSG drafted the Traffic Impact Study (TIS) for the proposed Grove Street housing development in Burlington, Vermont. Since completion of this study, the applicant has been in discussions with Burlington Public Works (BPW) regarding the roadway and pedestrian improvements that will be completed by the applicant in association with this project. From these discussions, the following additional pedestrian improvements have been identified:

1. The proposed project will now install a second rapid rectangular flashing beacon (RRFB) at the mid-block crossing east of the Schmanska Park parking area. This existing pedestrian crossing will also receive a new bump-out to further improve pedestrian safety.
2. The section of Grove Street proximate to Schmanska Park will now be reduced to 24 feet.
3. The proposed site access width has been reduced from approximately 57 feet to approximately 43 feet at the pedestrian crossing. We understand this change was made at the request of Burlington DPW and has been reviewed and accepted by the Burlington Fire Chief.

These recent additions to the project plan further improve the pedestrian environment proximate to the project site. In conjunction with previously planned sidewalk, pedestrian crossing, and traffic calming elements, the proposed pedestrian improvements greatly enhance the existing infrastructure and provide an important pedestrian connection between South Burlington, Burlington, and Winooski.

Additionally, since completion of the original TIS, the total number of proposed residential units has decreased from 247 units (assumed in previous analysis) to 232 units. This results in a net decrease in overall site-generated traffic during both peak hours, as shown below. Any impacts from the project as currently proposed, would be slightly less than previously analyzed in the Traffic Impact Study. In addition to the substantial off-site pedestrian improvements planned for this project, and traffic impact fees levied by the City, we had previously recommended the applicant make a fair-share contribution towards large-scale improvements at the Colchester Avenue/Riverside Avenue/Barrett Street triangle and at the US 2/White Street intersection. Based on the updated trip generation, these contributions would be approximately \$5,500 and \$14,500, respectively.

FIGURE 1: PREVIOUS AND CURRENT SITE TRIP GENERATION

	Previous Study (247 Units)			Current Proposal (232 Units)			Net Change (-15 units)		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
AM Peak Hour	25	100	125	23	94	117	-1	-6	-7
PM Peak Hour	100	54	154	94	51	145	-5	-3	-8

Please feel free to contact us with any questions.

Burlington Design Advisory Board

149 Church Street, City Hall

Burlington, VT 05401

www.burlingtonvt.gov/PZ/DAB

Phone: (802) 865-7188

Fax: (802) 865-7195

Matthew Bushy, Chair
Todd Thomas, Vice Chair
Ron Wanamaker
Sean McKenzie
Steven Offenhartz
Philip Hammerslough, Alt.
Jeremy Gates, Alt.



DESIGN ADVISORY BOARD Tuesday, March 10, 2015 Conference Room 12, City Hall, Burlington, VT MINUTES

Board Members present: Ron Wanamaker, Matt Bushey, Steve Offenhartz, Todd Thomas, Jeremy Gates (alternate), Phil Hammerslough (alternate)

Board Members Absent: Sean McKenzie

Staff: Scott Gustin, Mary O'Neil, Ken Lerner

Session I - 3:00-3:45 p.m.

15-0801PD; 140 Grove St (RL, Ward 1) Ireland Grove Street Properties

Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 223 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements

Also present:

Michael Dugan, Robin Jeffers, Scott Ireland, and Patrick O'Brien

Motion by Matt Bushey: I move we approve the proposal and forward to the DRB with the following recommendations:

1. Dumpster in front of unit H should be moved farther away from the adjacent duplex.
2. Intersperse the inclusionary units throughout the project.
3. Roof (with supports similar to pavilions) should be provided over the Garden Street exterior gang mailbox.
4. Pedestrian path should be added from 1st parking lot at NW corner to Grove Street.
5. As part of final plat approval:
 - a. Revised boundary survey to depict the merger of the two primary parcels on which the proposed development will be built;
 - b. Corrected labeling for the maintenance garage (i.e. should be building Q);
 - c. Depiction and screening of utility meters; and,
 - d. Installation of concrete crosswalks within the development if feasible.

2nd – Todd Thomas

Vote 6-0-0

Motion carries.

Session II - 3:45-4:30 p.m.

DAB

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Monday, March 30, 2015 9:15 AM
To: Scott Gustin
Cc: Ken Lerner
Subject: Grove Street

Hello Scott,

In regards to your final plan review and the final DPW recommendations and the DAB recommendations, I offer the following:

We concur with the DPW recommendations but would like to know your thoughts on the sidewalks/stairways leading Grove Street from the duplex's. The stairs cannot be simply pushed back out of the ROW. We prefer to stick with the existing design and enter a lease agreement with the City.

We concur with the DAB recommendations with the following exceptions:

#2. We believe that this recommendation is not within their scope of design responsibilities and therefore the DRB should not take this recommendation into their consideration. We say this for two reasons. The first is because there is still a possibility that we will be able to conform to the other option that was given to us by the DRB at Preliminary and that option was to have all inclusionary in one building as long as it was built first. The second reason has nothing to do with this project but has everything to do with somehow letting the DAB know that they should only be offering recommendations to the DRB that relate to a projects design. They are not the DRB.

#5(d). The installation of concrete crosswalks inside of the development would not be a wise decision. We like concrete, but as most people know, in Vermont we have a freeze thaw cycle that wreaks havoc on asphalt and concrete joints. The reason is simple, the two materials have two distinctly different binding compounds that react to temperature and water differently leading to differences in how they expand and contract which leads to an uneven joint. The problem then becomes exacerbated when a plow truck comes through the blade gets caught on that uneven edge.

We have 19 of these crosswalks within the project. If we had two or three, that would still be too many. We would like this recommendation to be removed.

Thank you,

Patrick

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Monday, March 09, 2015 4:14 PM
To: Scott Gustin
Subject: RE: conservation board attendance
Attachments: Bike Rack information.pdf; cross section of form lined wall.pdf; 102 _typical_gravity_wall_cross_section Recon block.pdf; RECON Block profile.jpg; Cluster Box Unit (Includes Pedestal) - 16 A Size Doors - Type III - Bronze - USPS Access _ Mailboxes.pdf; Detail of light L3.pdf

Hello Scott,

In regards to your staff notes, I offer the following clarifications and questions:

- A) Sheet L1.0 has 12 short term bike racks, but they are labelled in the table as bench and pad, which is incorrect. Attached as "Bike Rack information" is a copy of sheet L1.0. I highlighted the bike racks for you. These bike racks are for short term bike parking and are 7.5 feet long and will each hold three of our proposed bike holders which hold two bikes each, so each rack holds six bikes. There are 12 racks in all which equates to 72 spaces. I believe the ordinance requires 1 short term space for every 10 units, so we are proposing to more than double the required 32. In regards to the bike rack themselves, we are proposing to use something a bit funky, but I think the DAB and DRB will appreciate and like it. It is also embedded in the attached "Bike Rack information".

In regards to long term bike parking, last year before preliminary I confirmed with Nicole Losch from DPW that we can allocate space in each parking garage for long term storage. Attached are two garage floor plans, the first one is for buildings I,J,R,S & T and the second one is for building K. As you will see we have designated bicycle parking in the first parking space as you enter the building. Using the same bike rack spec, building K's space will properly fit 8 locked bikes and building I,J,R,S & T's space will hold 16 locked bikes. This brings the total long term bike spaces to 86 but does not include the fact that we also have a storage bay in front of each garage space that could fit a bike. This adds the potential for more than a 150 more long term bike spaces. The requirements for long term bike parking are 1 per every 4 units which equates to 58 required spaces so needless to say, we are proposing to well exceed the requirement. Again, I have been through this exercise with Nicole and she is on board with it.

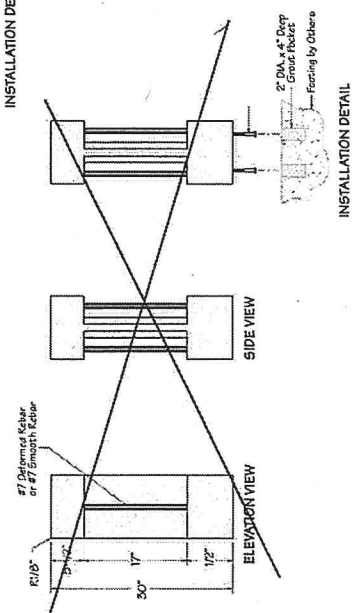
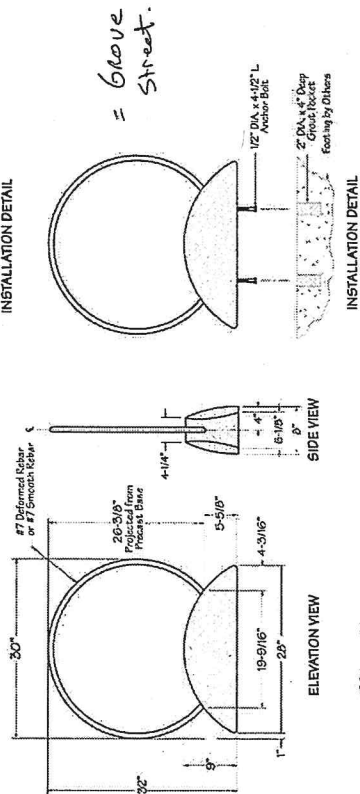
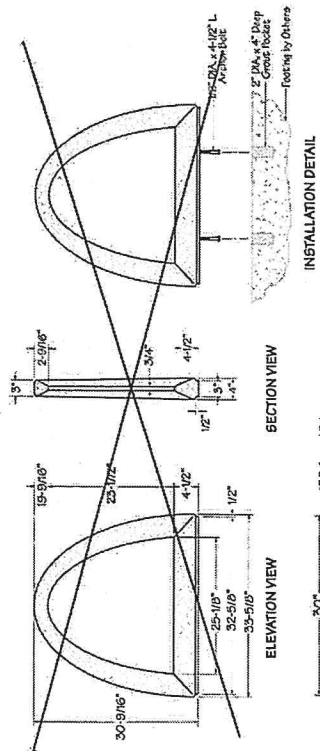
- B) We have two types of retaining walls, we are calling them Gravity and Form Lined and we refer to them on the last sheet of the package, A-11. Spec # 5 is the form lined wall. Form liners are the liners used in the preparation of designs on concrete walls. The use of form liners often results in more attractive poured concrete walls. Form liners come in many different shapes and designs, and can produce a variety of different results on concrete. A form liner panel is placed on the inside of a concrete forming system before the concrete has been poured and acts as a mold for the concrete to be formed against. Once the concrete has set, the forming system can be removed and the form liner can be stripped from the hardened concrete surface. The resulting concrete surface is permanently textured with the pattern of the form liner. The form liners are attached to forms and concrete is placed against the liner. The liner pattern is transferred into the wet concrete. After the concrete has cured, the liner is stripped and the unique sculpture is exposed. This wall has a standard poured footing and wall and the interior of the form is lined with a stone wall pattern and the concrete can be dyed to match the color you want. If you refer to the illustrations that look down Arbor Street to the lower level, this is a good depiction of the color and pattern we propose. Attached is a cross section of what that wall looks like. The second type of wall is depicted as Spec #6, and is basically a pre-cast boulder concrete retaining wall system. They are typically referred to as Recon Block wall Systems. In regards to



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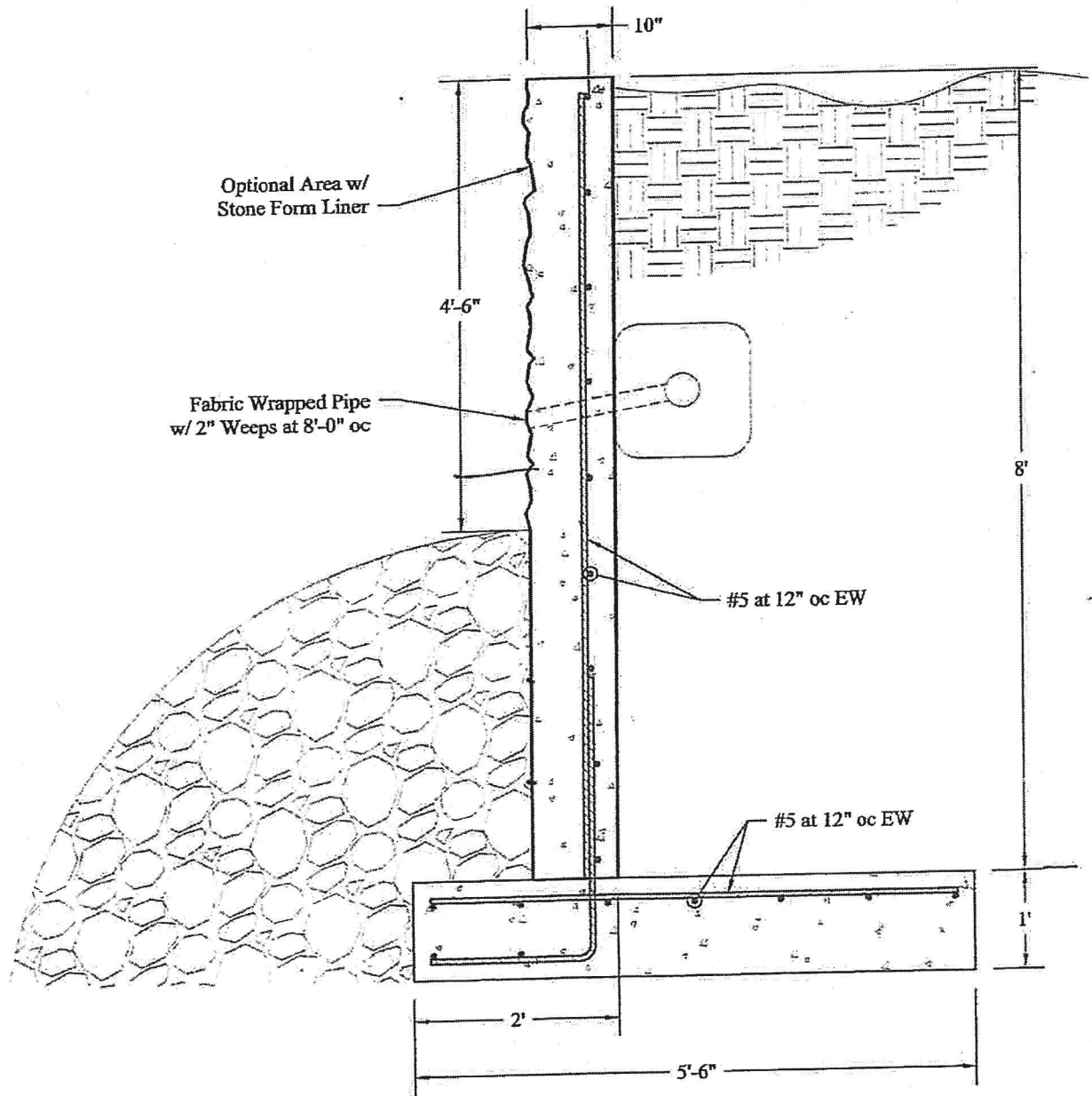


Fred Crook, Jr., President



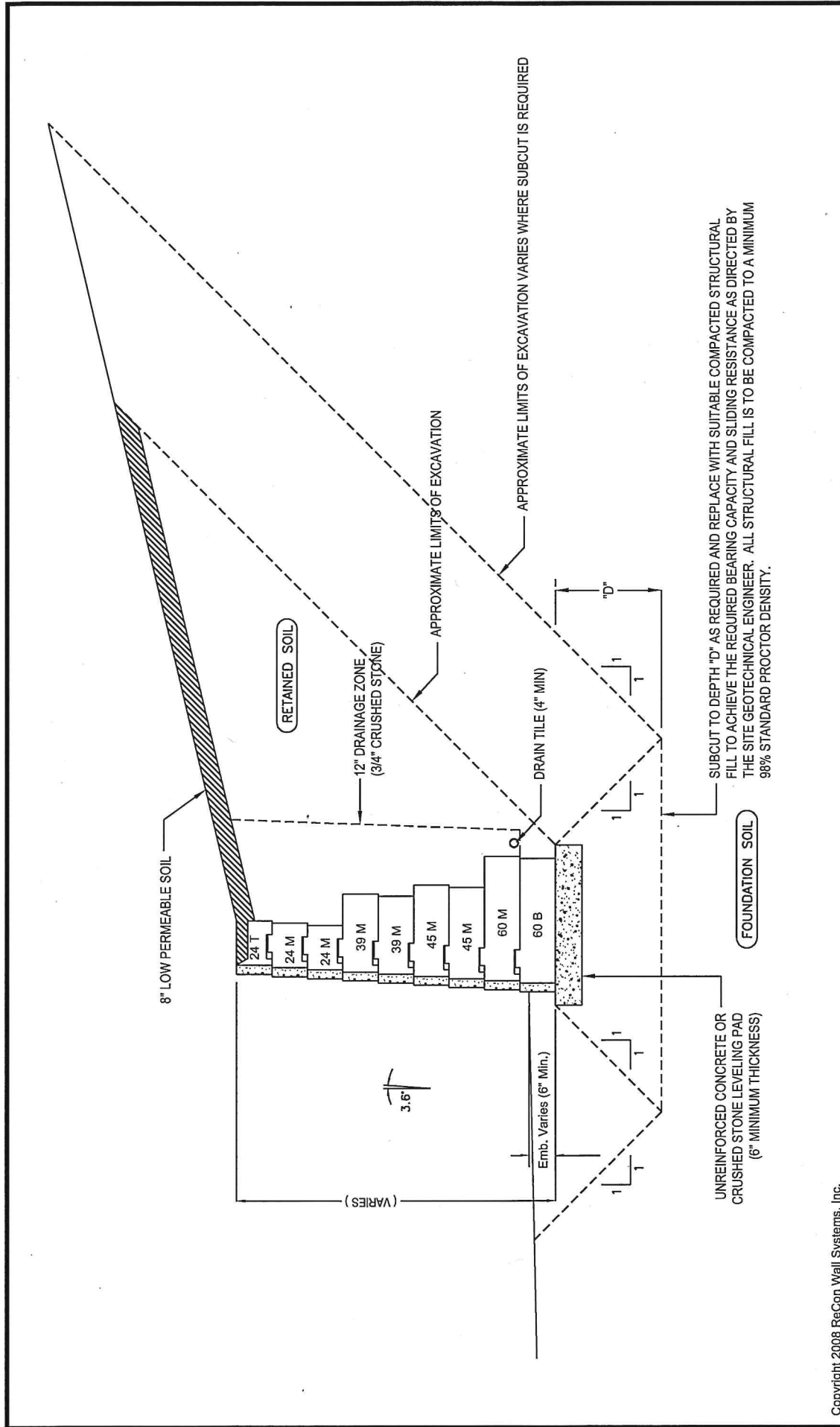
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CROSS SECTION FOR A "Form Lined" Wall.

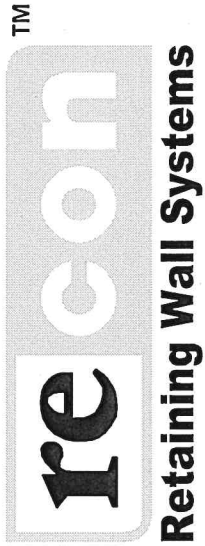


Retaining Wall Section (Typical)

Graded Street Apartments



TYPICAL GRAVITY WALL CROSS SECTION

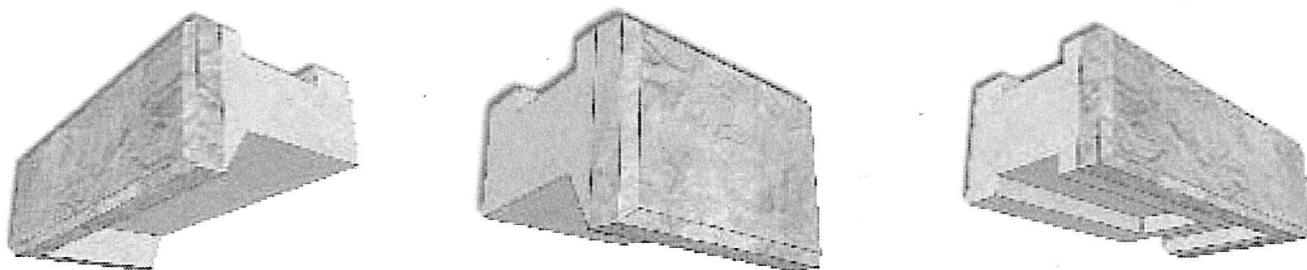


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7600 WEST 27TH STREET, #229
ST LOUIS PARK, MN 55426
PH: 952-922-0027
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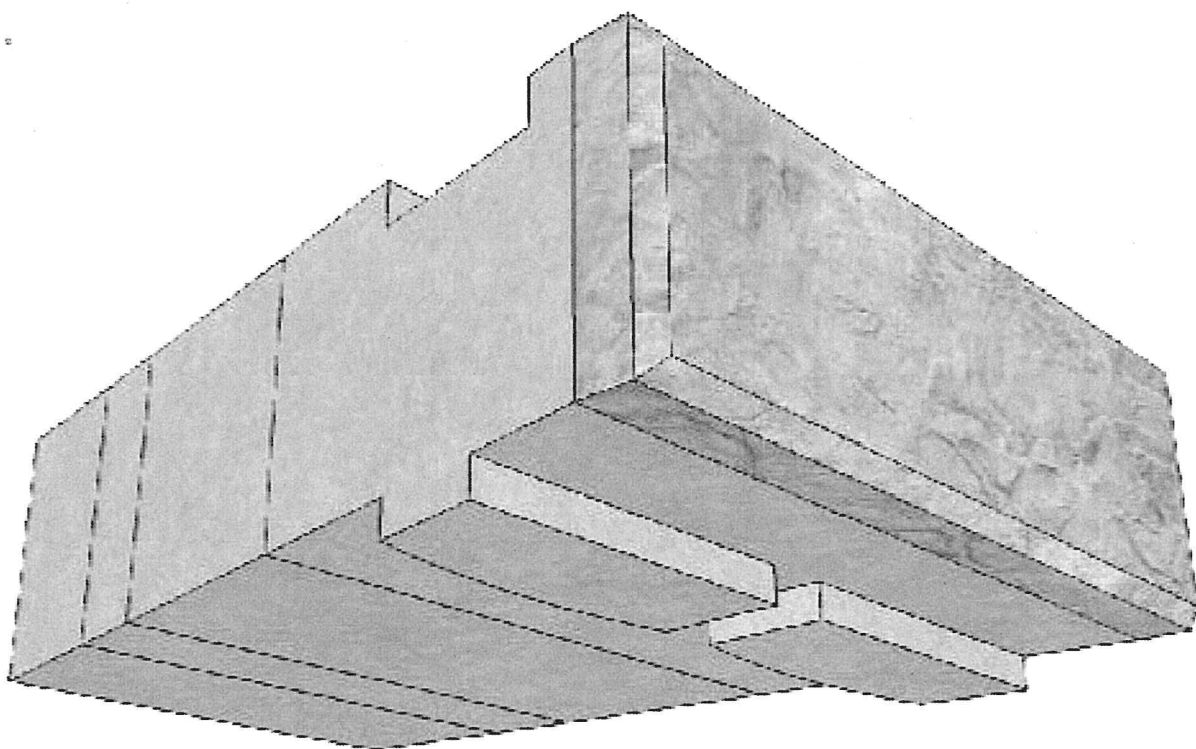
Design is for internal stability of the RECON wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to RECON's specification for this project.

Disclaimer: This drawing was prepared by ReCon Wall Systems, Inc. and to the best of our knowledge, accurately represents the product use in the application that is illustrated. This drawing is for conceptual, instructional, and estimating purposes only. Anyone making use of this drawing does so at their own risk and assumes all liability for such use. Final design for construction purposes must be done by a registered professional engineer who is familiar with the product and who has taken into account



RECON "SERIES 60" RETAINING WALL BLOCK CATALOG

March 2014



MEMO

Traffic update



TO: Patrick O'Brien
FROM: Ben Swanson
DATE: March 25, 2015
SUBJECT: Grove Street Development – Review of March 2015 Traffic Improvements

DEPARTMENT OF
PLANNING & ZONING

In October 2013, RSG drafted the Traffic Impact Study (TIS) for the proposed Grove Street housing development in Burlington, Vermont. Since completion of this study, the applicant has been in discussions with Burlington Public Works (BPW) regarding the roadway and pedestrian improvements that will be completed by the applicant in association with this project. From these discussions, the following additional pedestrian improvements have been identified:

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PM Peak Hour	100	54	154	94	51	145	-5	-3	-8

Please feel free to contact us with any questions.



R | S | G INC.
TRANSPORTATION

Traffic Impact Study

Grove Street Development Burlington, VT

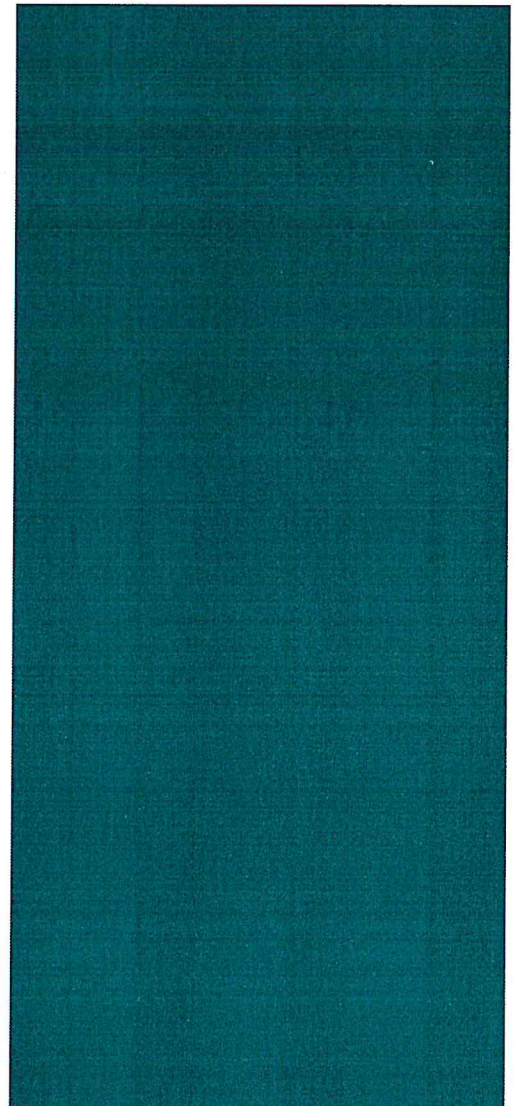
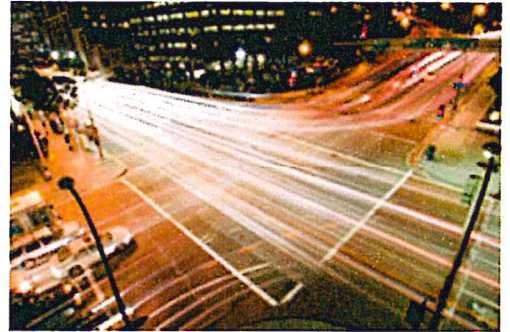
October 2013

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OCT 24 2013

DEPARTMENT OF
PLANNING & ZONING

PLANNING ■ ENGINEERING ■ DESIGN



Report Prepared by:



55 Railroad Row, White River Junction, Vermont 05001
TEL 802.295.4999 ■ FAX 802.295.1006 ■ www.rsginc.com

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1.0 EXECUTIVE SUMMARY

This study evaluates the traffic impacts associated with the proposed redevelopment of the SD Ireland concrete batch plant on Grove Street in Burlington, Vermont into a residential use. The proposed project includes 247 apartment units.

1.1 Key Findings

Key findings, presented in greater detail below, include:

1. The proposed Grove Street housing project would replace the existing SD Ireland concrete batch plant on Grove Street in Burlington, Vermont with a 247 unit apartment development.
2. Using trip generation rates presented by the Institute of Transportation Engineers (ITE) for this land use, we calculate this project would generate approximately 125 new vehicle trips during the AM peak hour (25 entering and 100 exiting) and 154 vehicle trips during the PM peak hour (100 entering and 54 exiting).
3. Removal of the existing SD Ireland concrete plant will result in a reduction of existing concrete plant traffic, including heavy vehicle and passenger car traffic, in this area. Based on average production levels and existing administrative operations at the plant, we expect this project to eliminate approximately 61 existing AM peak hour trips (41 entering and 20 exiting) and approximately 61 existing PM peak hour trips (22 entering and 39 exiting) from the local roadways.
4. Long delays and Level of Service F conditions exist at the Riverside Avenue/Barrett Street and Colchester Avenue/Barrett Street intersections and at the US 2/White Street intersection, with or without the addition of site-generated traffic. Delays at all other study area intersections are projected to remain at acceptable levels and increase by fewer than 5 seconds per vehicle with the addition of project generated traffic.
5. A review of historic VTrans crash data identified three High Crash Locations within the study area at the Colchester Avenue/Barrett Street intersection, at the Patchen Road/White Street intersection, and at the US 2/White Street intersection.
6. RSG recently conducted the Colchester Avenue Corridor study as a planning document for the Chittenden County Regional Planning Commission and identified a preferred alternative for reconstructing the Colchester Avenue/Riverside Avenue intersection triangle and we recommend this improvement be pursued to improve both operations and safety in this area, with or without the proposed project.
7. At the US 2/White Street intersection, major improvements are currently planned as part of the City Center initiative and Market Street improvements project. Improvements on Market Street are currently slated for fiscal year 2016 in the 2013-2016 CCRPC Transportation Improvement Program (TIP). Full improvements at the US 2/White Street intersection, are currently planned but are not yet included in the near term Transportation Improvement Program.
8. At the Patchen Road/White Street intersection overall LOS B and LOS C conditions are maintained during the weekday AM and PM peak hours, respectively, with the addition of project generated traffic.
9. Using the City of Burlington's impact fee calculator, we calculate approximately \$53,600 in traffic impact fees to be associated with the proposed project.
10. We have also examined the proposed site access on Grove Street and have found that stopping and corner sight distances exceed design standards in both directions.



11. We conducted a turn-lane warrant assessment and found that a dedicated left-turn lane is not warranted on Grove Street at the site access.
12. We project average vehicle delays of less than 20 seconds per vehicle for traffic exiting the site driveway and expect the access to operate safely and effectively.
13. We have examined plans for proposed off-site traffic calming and pedestrian accommodation improvements prepared by O'Leary Burke Civil Associates including new sidewalks, crosswalks, new curbing, new lighting, and a proposed solar powered speed feedback display.
14. We believe the proposed pedestrian improvements greatly enhance the existing infrastructure. The proposed sidewalk section south of the project site provides a critical pedestrian link between South Burlington and Burlington and Winooski, creating a continuous pedestrian route between these areas. Additionally, improved curbing signage and striping at crossings north of the project site will help improve pedestrian safety for all pedestrians in the area.

1.2 Recommendations

Recommendations arising from the analysis presented below include:

1. We recommend a cost sharing allocation be paid by the developer to the City of Burlington towards eventual improvements at the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.43% during the PM peak) and the estimated project cost (\$1.4 million)¹, we calculate a fair share contribution of approximately \$6,000.
2. We recommend a cost sharing allocation be paid by the developer to the City of South Burlington towards eventual improvements at the US 2/White Street intersection. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission based on heavy use by existing traffic. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.41% during the AM peak) and the estimated project cost (\$3.94 million)², we calculate a fair share contribution of approximately \$16,000.
3. Due to the high prevalence of rear-end collisions at the Patchen Road/White Street intersection we recommend advance intersection warning signs (MUTCD W3-3) be installed on both the eastbound and westbound, White Street, approaches to this intersection. Similar signs already exist on the northbound and southbound, Patchen Road approaches (Figure 36).
4. To enhance pedestrian connectivity and to improve pedestrian accommodations proximate to the project site, we recommend all off-site traffic calming and pedestrian enhancements identified by O'Leary Burke Civil Associates be installed prior to the first certificate of occupancy for the project.

¹ The December 2011 Colchester Avenue Corridor Plan, conducted by Resource Systems Group indicated an approximate project cost of \$1.4 million to reconstruct the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle.

² The August 2007 US 2 Corridor Study, conducted by Resource Systems Group indicated an approximate project cost of \$3.94 million to reconstruct the US 2/White Street and US 2/Patchen Road intersections.



5. In addition to the pedestrian enhancements proposed by O'Leary Burke Civil Associates we recommend the existing pedestrian warning signs at the crosswalk on Grove Street north of the paved public parking area (north of the project access) be upgraded to new fluorescent yellow warning signs (W11-2) and be accompanied by diagonal arrows indicating the crossing location (W16-7P) and that these signs be gate-posted for both northbound and southbound traffic prior to the first certificate of occupancy for the project. We recommend similar signage be installed at the second pedestrian crossing approximately 300 feet north of this parking area at the north end of the park.
6. Due to the tight turning radius for the southbound right-turn from Barrett Street onto Grove Street, we recommend the "No Parking Here To Corner" sign be relocated as indicated by O'Leary Burke Civil Associates, assuming Burlington Public Works is willing to accept the associated reduction in on-street parking.

We believe that if the above recommendations are followed, traffic associated with construction of the proposed Grove Street housing project will not cause unreasonable congestion or unsafe conditions on the surrounding road network.



2.0 INTRODUCTION

This study evaluates the traffic impacts associated with the proposed redevelopment of the SD Ireland concrete batch plant on Grove Street in Burlington, Vermont into a residential use. The proposed project includes 247 apartment units. This Traffic Impact Study includes the following items:

- The project description and study scope
- Traffic volumes with and without the project
- Estimated congestion with and without the project
- Estimated queue lengths with and without the project
- A safety analysis
- Recommendations

This study relies upon design standards and analysis procedures documented in the 2000 *Highway Capacity Manual*,¹ *Trip Generation*,² *A Policy on Geometric Design of Highways and Streets*,³ *Manual on Uniform Traffic Control Devices (MUTCD)*,⁴ *Traffic Impact Evaluation: Study and Review Guide*,⁵ and the Vermont State Design Standards.⁶

3.0 PROJECT DESCRIPTION

The proposed project would replace the existing SD Ireland concrete batch plant on Grove Street in Burlington, Vermont with 247 units of apartment housing. The proposed project site plan is shown below in Figure 1. All development traffic would access the surrounding road network via a single driveway onto Grove Street.

¹ Transportation Research Board, *Highway Capacity Manual* (Washington, DC: National Academy of Sciences, 2000).

² Institute of Transportation Engineers, *Trip Generation* 9th Edition (Washington, D.C.: Institute of Transportation Engineers, 2012).

³ American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition (Washington DC: AASHTO, 2011).

⁴ American Traffic Safety Services Association (ATSSA), ITE, and AASHTO, *Manual on Uniform Traffic Control Devices*, 2009 Edition (Washington DC: FHWA, 2009).

⁵ Vermont Agency of Transportation, Development Review Section, *Traffic Impact Evaluation Study and Review Guide* (October 2008).

⁶ State of Vermont Agency of Transportation, *Vermont State Standards* (Montpelier: VTTrans, 1 July 1997).



VTrans guidelines specify that a traffic study should be considered if the proposed development will generate 75 or more peak hour trips. The geographic scope of the study should also include the immediate access points and those intersections or highway segments receiving 75 or more project-generated peak hour trips.¹

¹ Vermont Agency of Transportation, Traffic Research Unit, *Traffic Impact Study Guidelines* (October 2008).



Figure 2: Study Area Intersections



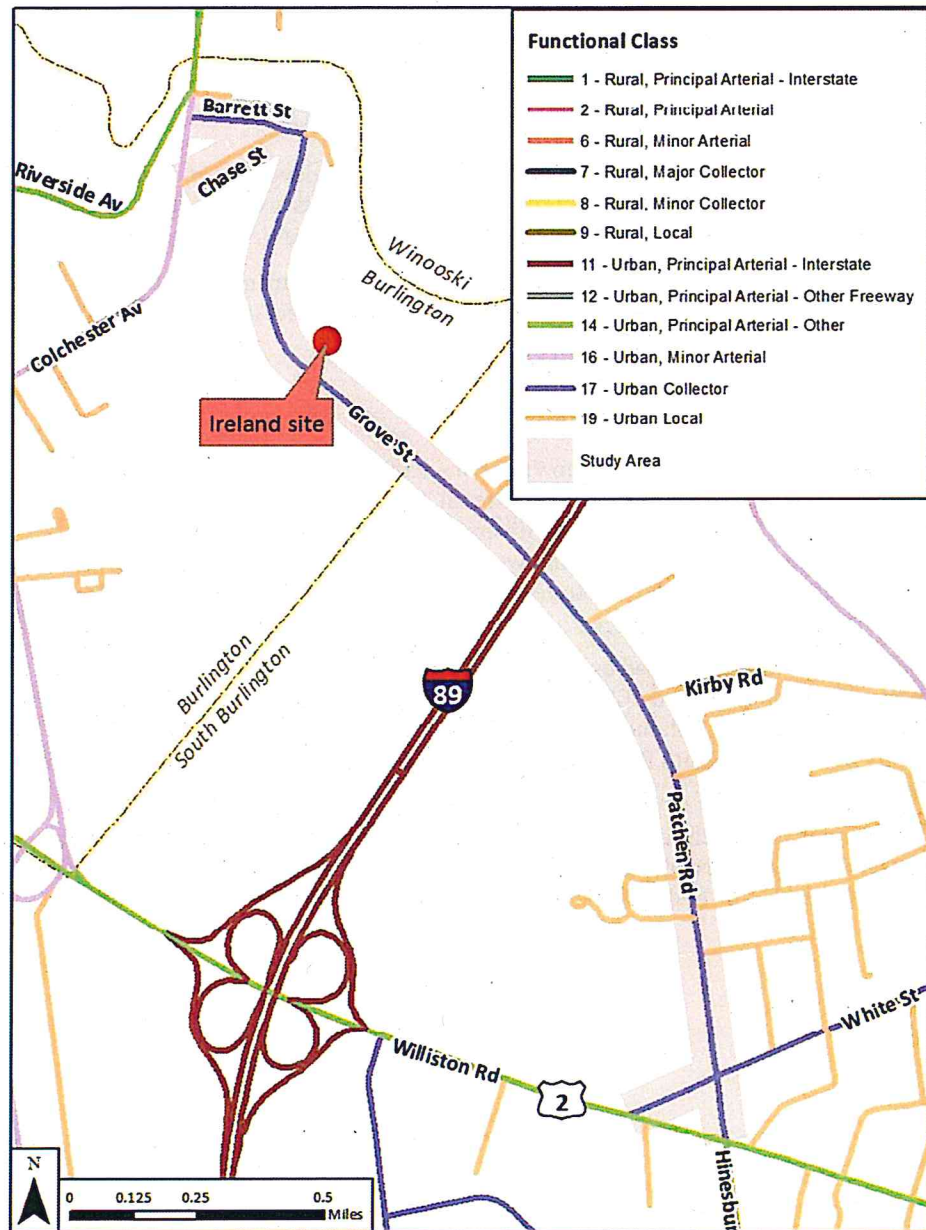
4.1 Local Traffic

In Burlington, Grove Street begins at Barrett Street and ends at the South Burlington town line. From there, Grove Street becomes Patchen Road and continues in South Burlington south to US 2. Grove Street and Patchen Road are both classified as Urban Collectors (Figure 3). In 2009 VTrans recorded an Annual Average Daily Traffic (AADT) volume of 6,000 vehicles per day on Patchen Road.¹ The speed limit on Patchen Road and Grove Street is posted at 25 mph.

¹ The AADT was measured at VTrans count station S6D332 just north of Pine Street in South Burlington.



Figure 3. Functional Classification of Study Area Roads and Adjacent Area



This analysis examines conditions during the weekday AM and PM peak design hours. Vermont traffic conventions typically call for analyzing traffic conditions in the base year (the year construction is estimated to be complete) and five years in the future. However, statewide VTrans continuous traffic count (CTC) data on all Urban roads as well as Burlington specific CTC data from count station P6D001 on VT 127 indicate no background traffic growth over the next 20 years¹. Because no background traffic growth is projected in the study area, a separate future year analysis is not included. Therefore, the following scenarios are evaluated in this study:

¹ Continuous Traffic Counter Grouping Study and Regression Analysis, VTrans Traffic Research Unit, 2012



- 2016 No Build (AM and PM peak hours)
- 2016 Build, including traffic from the proposal (AM & PM peak hours)

4.2 Other Development Volumes

Other development volumes (ODVs) represent trips generated by anticipated developments in the study area that have been permitted but not yet constructed. Trips generated by ODVs are included in every scenario because we assume they are already present on the road network in the No Build scenario.

We have spoken with Planning Department staff in both Burlington and South Burlington and identified the City Center¹ project in South Burlington and the 110 Riverside Avenue² project in Burlington to be included in the background traffic volumes.

4.3 Scenario Volumes and Adjustments

RSG conducted weekday turning movement counts from 7:00 AM – 9:00 AM and from 4:00 PM – 6:00 PM at five of the study intersections on December 18, 2012. Additional 2009 turning movement count data from VTrans were used for the US 2/White Street and the Riverside Avenue/Colchester Avenue intersections. Weekday AM peak hour (7:30-8:30 AM) and weekday PM peak hour (4:30-5:30 PM) traffic count volumes from these counts were then adjusted to represent the design hour volume (DHV)³ in 2016 using the following two adjustment factors:

7. Design hour adjustment factors are based on VTrans short term counter S6D213, located on White Street west of Patchen Road and CCRPC counter D022, located on Colchester Avenue just south of Mill Street.⁴ Design Hour Volume (DHV) adjustment factors increase Burlington intersection counts by 17% and South Burlington intersection counts by 22% to achieve design hour conditions.
8. An annual adjustment factor, which represents general background traffic growth, is based on average growth trends for urban roads in Vermont, as presented in the 2012 VTrans Redbook.⁵ As noted above, the 2012 VTrans Redbook projects no future background growth on urban roads.

¹ The City Center project is a major initiative in South Burlington that includes new streets and encourages mixed use-development. Traffic volumes for this ODV were obtained from the Market Street improvements Traffic Study conducted by Vanasse Hangen Brustlin, Inc.

² This project consists of a 57 unit apartment building located at 110 Riverside Avenue in Burlington, VT.

³ The DHV is the 30th highest hour of traffic for the year and is used as the design standard in Vermont.

⁴ VTrans count station S6D213 had an AADT of 6,700 in 2009 and CCRPC counter D022 had an AADT of 14,800 in 2009, which was the most recent year of available data at both counters.

⁵ As presented in the 2012 VTrans Redbook, historic traffic trends in Vermont indicate no background growth for Urban roadways or at Burlington specific CTC station P6D001.



4.4 Trip Generation

Trip generation refers to the number of new vehicle trips originating at or destined for a particular development. For this analysis we used trip generation rates from the Institute of Transportation Engineer's *Trip Generation*¹ to estimate peak hour site-generated traffic. Considering the 247 proposed units of apartment housing, we have estimated new project trip generation at the site using ITE Land Use Code 220 (Apartment). During the weekday AM peak hour we project the site will generate 125 vehicle trips (25 entering and 100 exiting). During the weekday PM peak hour we project the site will generate 154 vehicle trips (100 entering and 54 exiting).

Figure 4: Trip Generation Summary

AM Peak Hour: 125 trips (25 enter, 100 exit)
PM Peak Hour: 154 trips (100 enter, 54 exit)

New vehicle trips were distributed onto the surrounding road network following background residential traffic patterns obtained from traffic counts conducted by RSG at the Patchen Road/Valley Ridge Road intersection, approximately 0.4 miles to the south.² Beyond the initial distribution at the site driveway, site traffic was distributed based on background traffic patterns.

While the proposed residential use will add traffic to the study area road network, the removal of the existing SD Ireland concrete batch plant will remove existing concrete-related traffic from the study area road network. To account for existing concrete plant related traffic, we have discussed current operation levels with plant management. From this discussion, we understand the plant produces on average approximately 600 yards of material per day with approximately 6.5 yards per delivery vehicle. Additionally, the site requires approximately 50 yards of aggregate per day, 8 loads of cement per day, and also dispatches approximately 35 pump loads per day and 20 block, boom, and form trucks per day. Summing up all truck activity results in approximately 205 truckloads per day generated from this site. We understand the plant typically operates from 6:00 AM to 6:00 PM and that plant operations are reasonably consistent over the course of the 12 hour day. The plant employs approximately 100 people, including administrative staff who occupy approximately 17,500 square feet of office space on-site. Based on plant production and truck information, along with ITE trip generation rates for general office use (ITE Land Use 710), we assume the plant currently generates approximately 61 one-way trips during the weekday AM peak hour (41 entering and 20 exiting) and approximately 61 one-way trips during the weekday PM peak hour (22 entering and 39 exiting) on an average day.

Figure 5 presents a summary of assumptions and estimates for the existing traffic generated by the SD Ireland concrete batch plant.

¹ Institute of Transportation Engineers, *Trip Generation* 9th Edition (Washington, D.C.: Institute of Transportation Engineers, 2012).

² The weekday AM peak hour count was conducted on 25 January 2013 and the weekday PM peak hour count was conducted on 18 December 2012.



Figure 5: Existing Concrete Plant Traffic Summary

Technical Operations		Administrative Support	
Concrete Production		ITE Land Use 710 (General Office)	
600	yards of concrete per average day	17,500	square feet of administrative space
6.5	yards of concrete per truck load	1.56	AM peak hour trips/1,000 sq. ft.
92	loads of concrete per day	1.49	PM peak hour trips/1,000 sq. ft.
Raw Materials and Support Trucks		Administrative Peak Hour Distribution	
50	loads of aggregate per day	88%	enter during AM peak hour
35	pump loads per day	12%	exit during AM peak hour
20	block boom and form loads per day	17%	enter during PM peak hour
8	loads of cement per day	83%	exit during PM peak hour
113	raw material and support loads per day	Hourly Trip Summary	
Hourly Trip Summary		Hourly Trip Summary	
205	truck loads per day	24	enter during AM peak hour
12	hours per day of operation	3	exit during AM peak hour
17	truck loads per hour	4	enter during AM peak hour
34	truck trips per hour	22	exit during AM peak hour
Existing Operations Trip Generation Summary			
41	enter during AM peak hour	22	enter during PM peak hour
20	exit during AM Peak hour	39	exit during PM Peak hour

Figure 6 through Figure 9 present the distribution of new housing development traffic and the reduction of concrete plant generated traffic.



Figure 6: AM Peak Hour Grove Street Housing Trip Generation

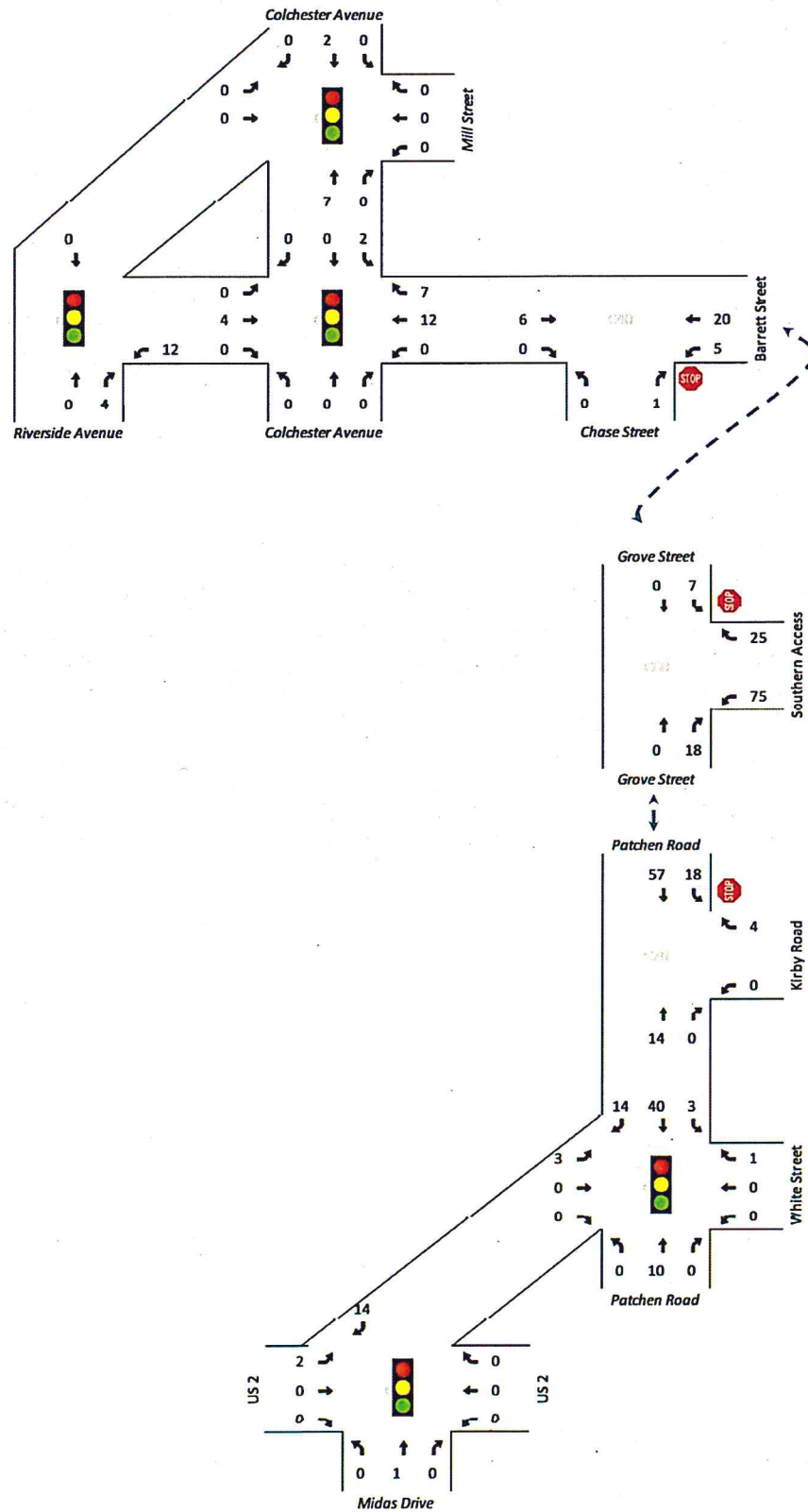


Figure 7: PM Peak Hour Grove Street Housing Trip Generation

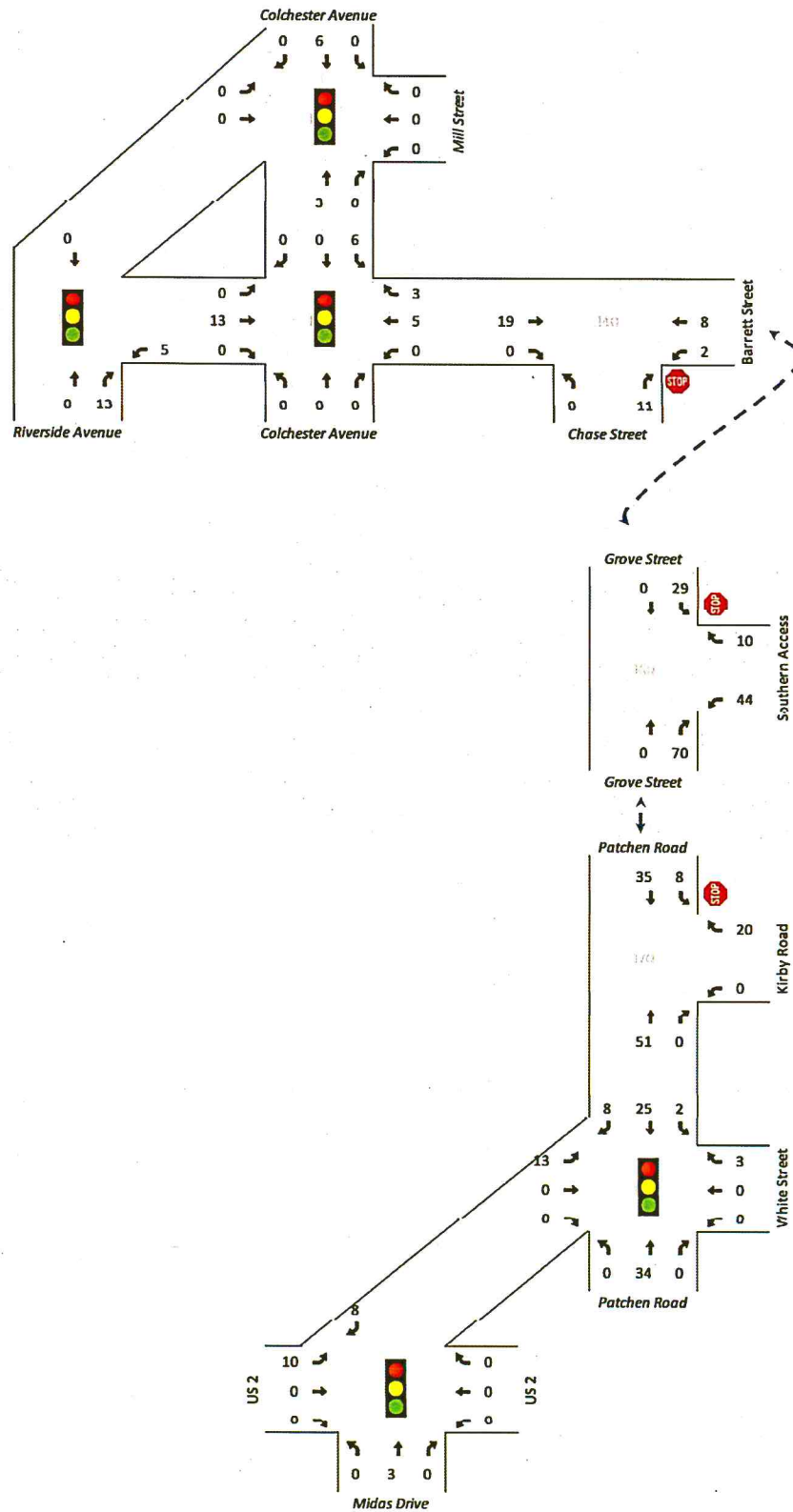


Figure 8: AM Peak Hour SD Ireland Concrete Trip Reduction

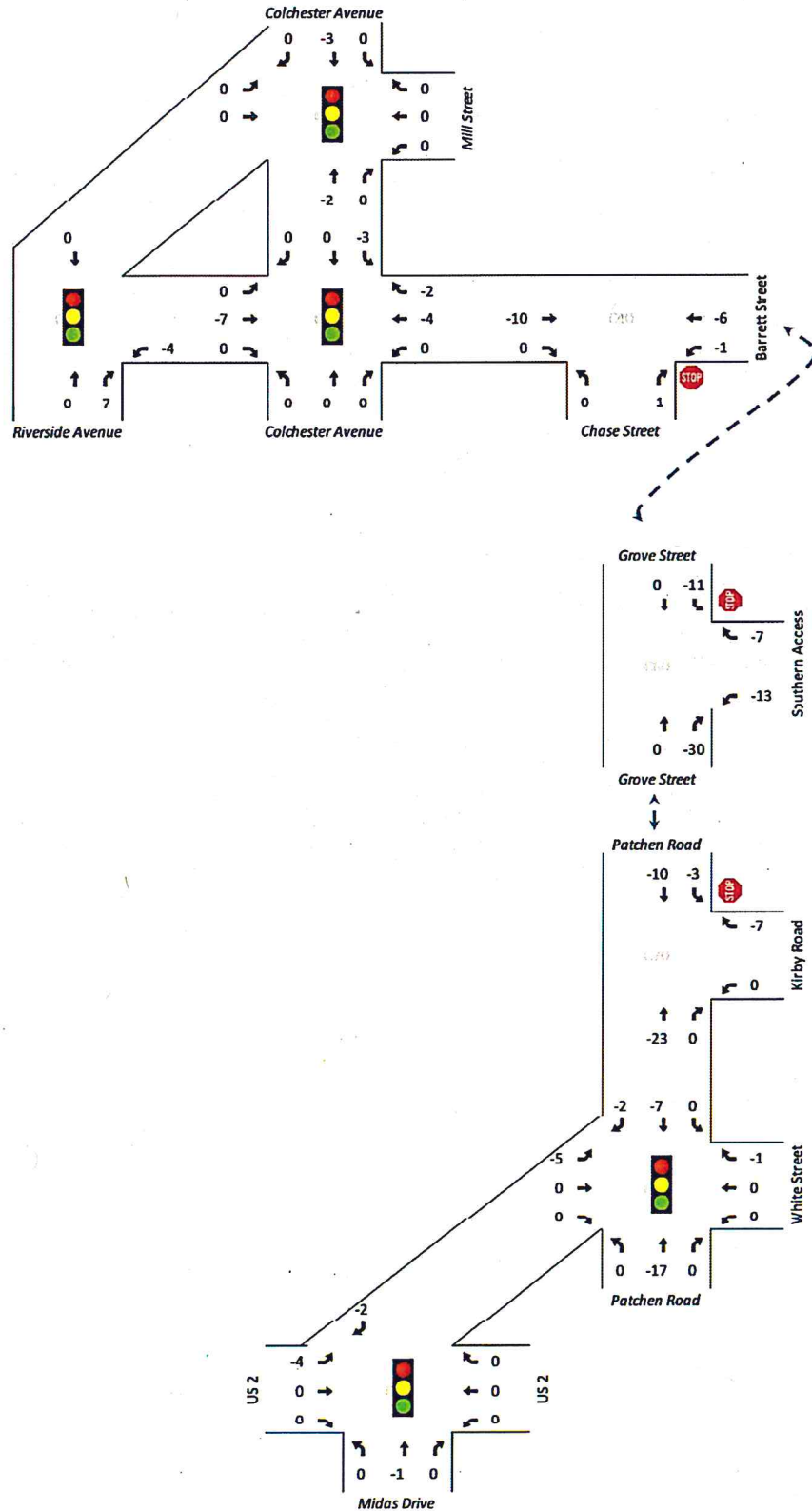
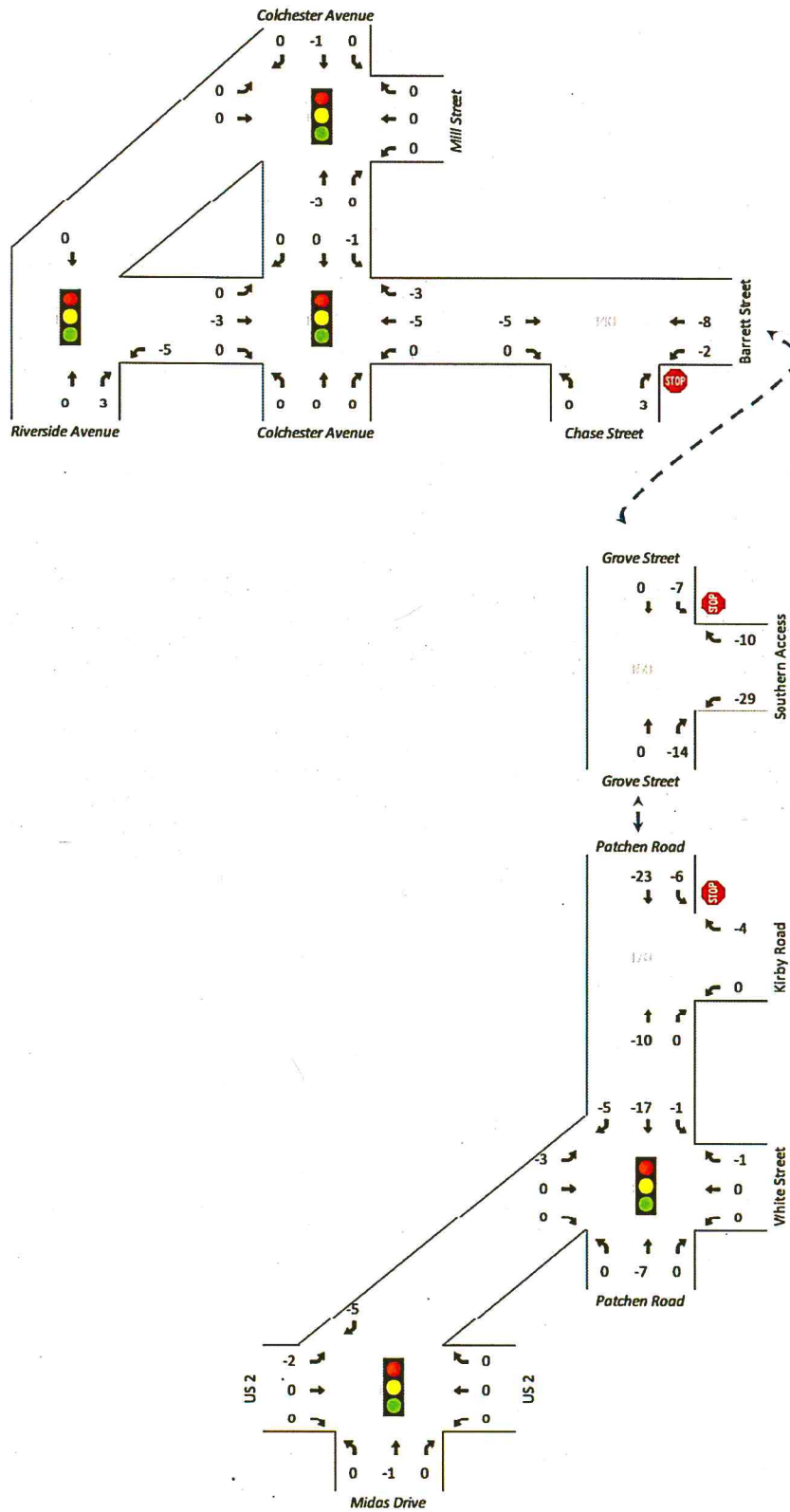


Figure 9: PM Peak Hour SD Ireland Concrete Trip Reduction



4.5 Scenario Volume Graphics

Weekday AM and PM peak hour volumes for the 2016 No Build and Build scenarios are presented in Figure 10 through Figure 13. No Build volumes represent the design hour adjusted count volumes plus the addition of other development traffic (ODVs) as noted above. Build scenario volumes add project generated traffic and remove existing Ireland concrete traffic from the No Build volumes.



Figure 10: 2016 AM Peak Hour No Build Scenario Volumes

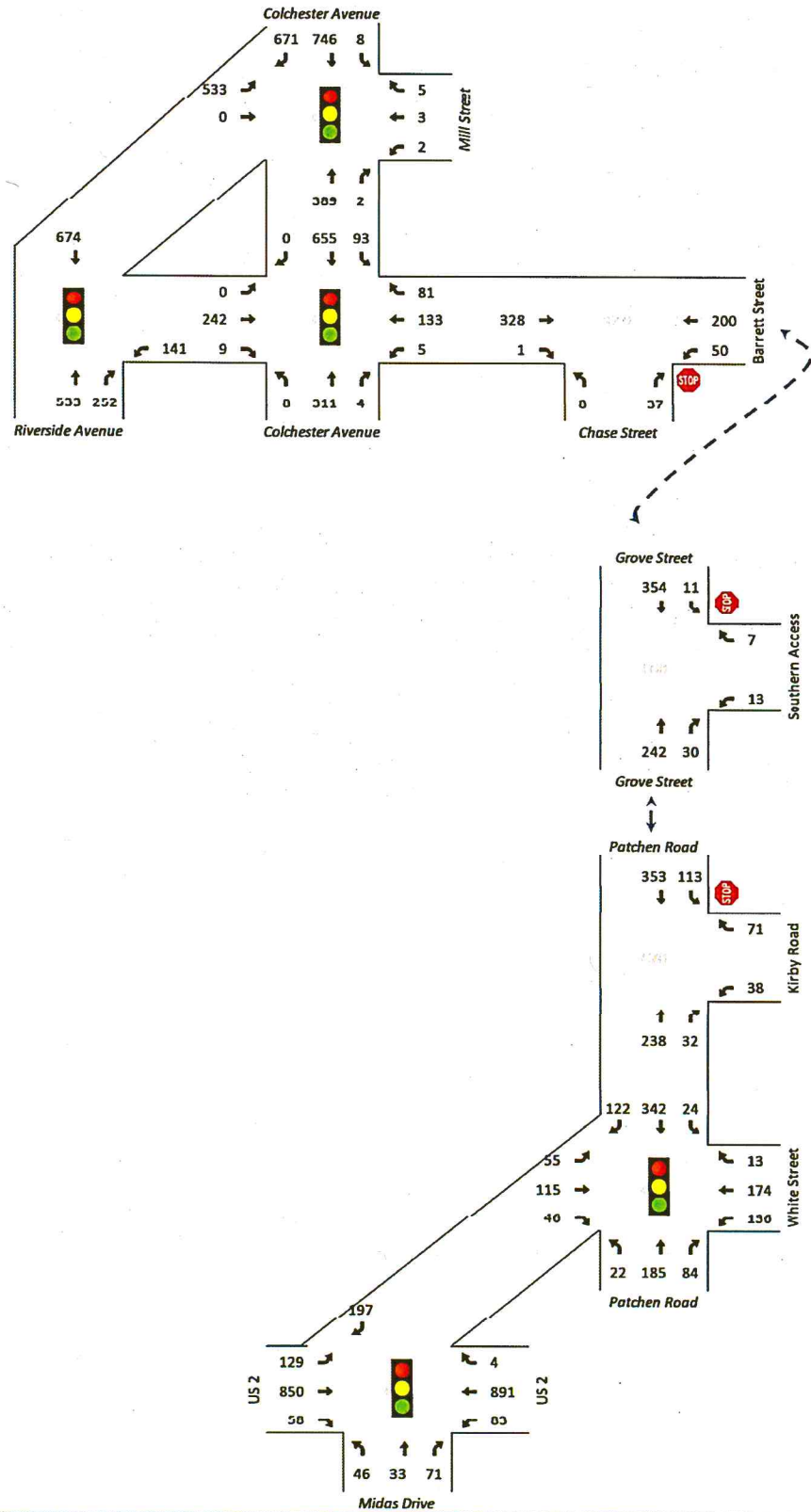


Figure 11: 2016 PM Peak Hour No Build Scenario Volumes

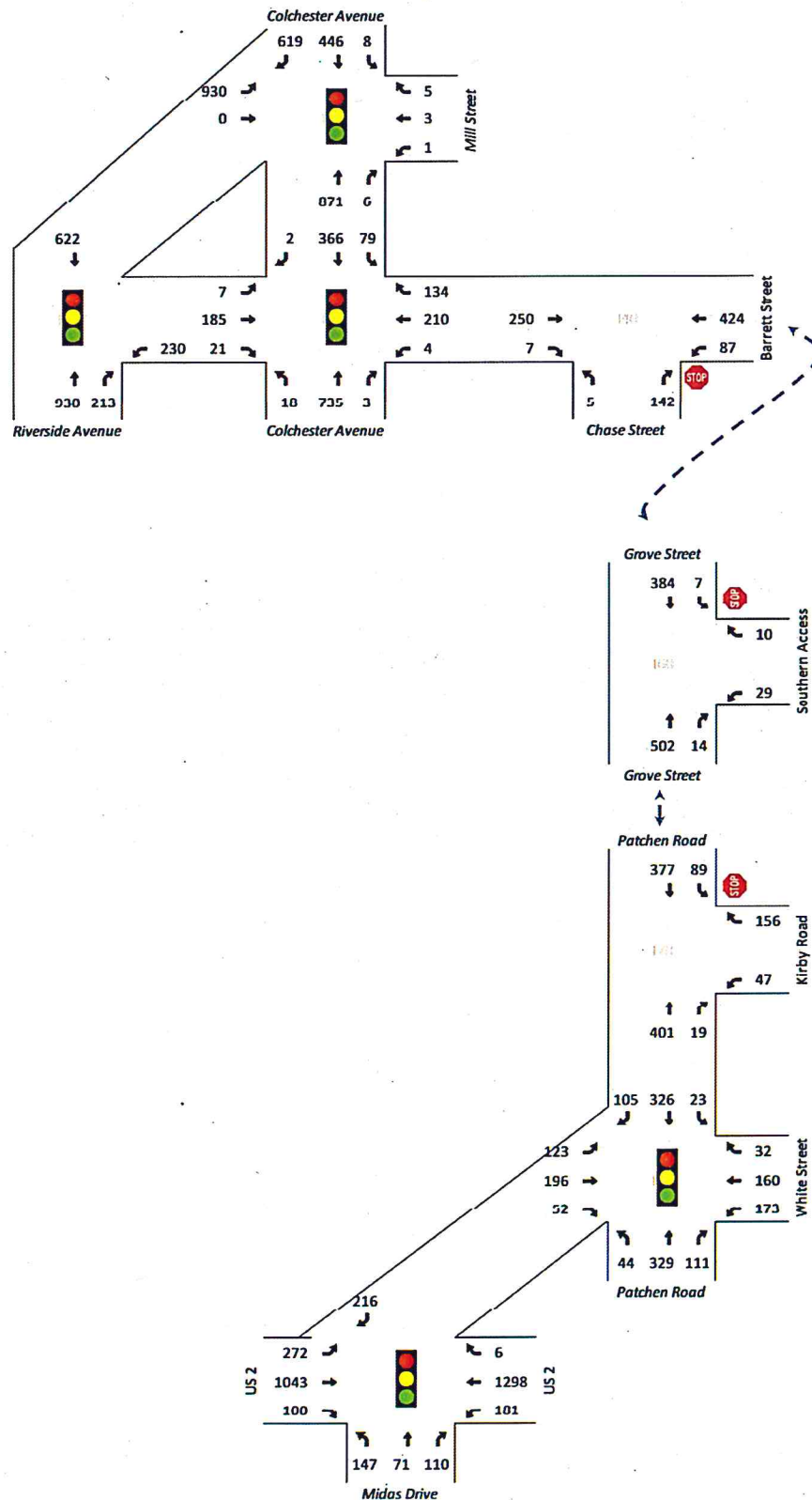


Figure 12: 2016 AM Peak Hour Build Scenario Volumes

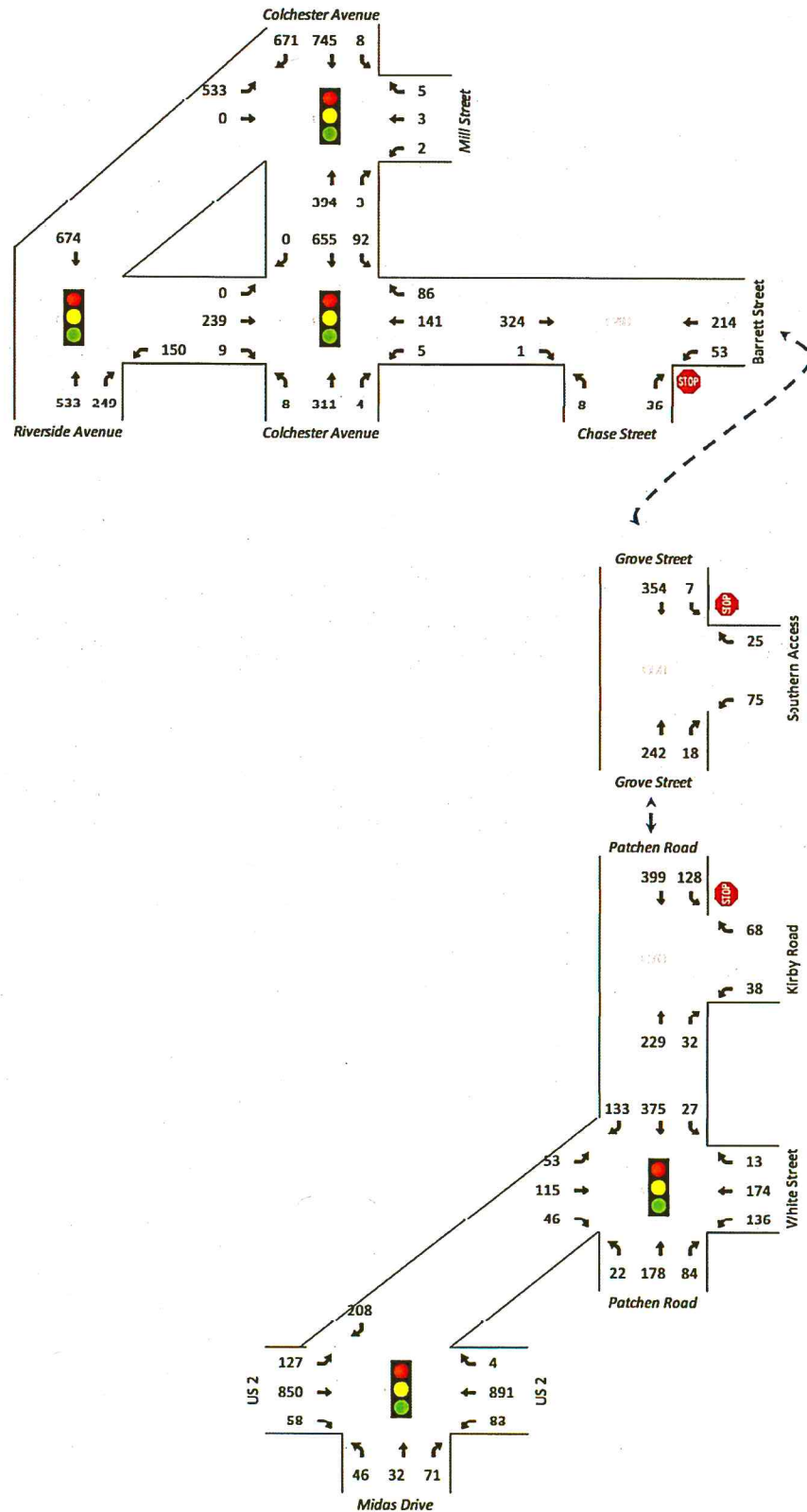
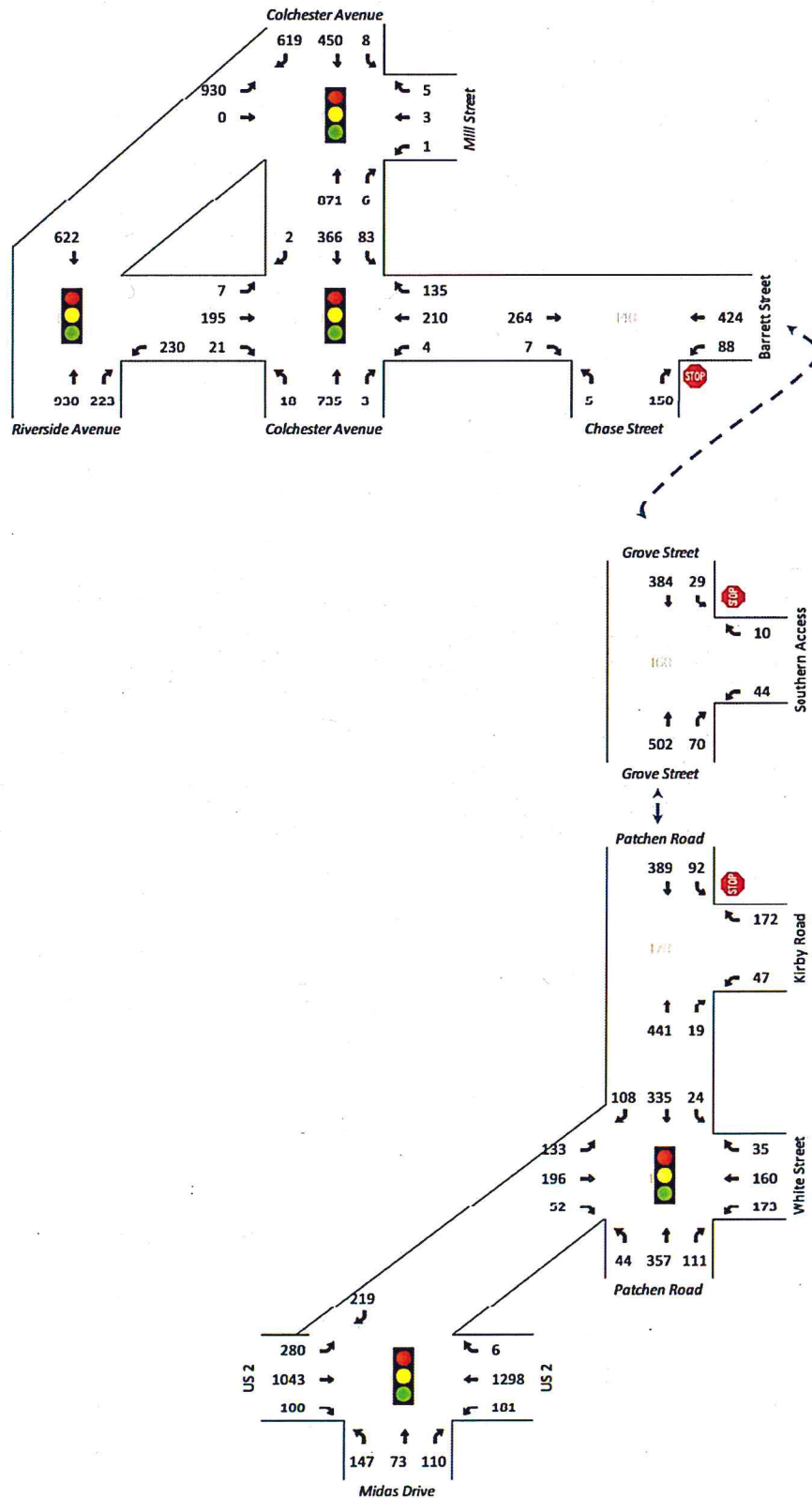


Figure 13: 2016 PM Peak Hour Build Scenario Volumes



5.0 CONGESTION ANALYSIS

5.1 Level-of-Service Definition

Level-of-service (LOS) is a qualitative measure describing the operating conditions as perceived by motorists driving in a traffic stream. LOS is estimated using the procedures outlined in the 2000 Highway Capacity Manual. In addition to traffic volumes, key inputs include the number of lanes at each intersection and the traffic signal timing plans. The LOS results are based on the existing lane configurations and control types (signalized or unsignalized) at each study intersection.

The 2000 Highway Capacity Manual defines six qualitative grades to describe the level of service at an intersection. Level-of-Service is based on the average control delay per vehicle. Figure 14 shows the various LOS grades and descriptions for signalized and unsignalized intersections.

Figure 14: Level-of-Service Criteria for Signalized and Unsignalized Intersections

LOS	Characteristics	Unsignalized Total Delay (sec)	Signalized Total Delay (sec)
A	Little or no delay	≤ 10.0	≤ 10.0
B	Short delays	10.1-15.0	10.1-20.0
C	Average delays	15.1-25.0	20.1-35.0
D	Long delays	25.1-35.0	35.1-55.0
E	Very long delays	35.1-50.0	55.1-80.0
F	Extreme delays	> 50.0	> 80.0

The delay thresholds for LOS at signalized and unsignalized intersections differ because of the driver's expectations of the operating efficiency for the respective traffic control conditions. According to HCM procedures, an overall LOS cannot be calculated for two-way stop-controlled intersections because not all movements experience delay. In signalized and all-way stop-controlled intersections, all movements experience delay and an overall LOS can be calculated.

The VTrans policy on level of service is:

- Overall LOS C should be maintained for state-maintained highways and other streets accessing the state's facilities
- Reduced LOS may be acceptable on a case-by-case basis when considering, at minimum, current and future traffic volumes, delays, volume to capacity ratios, crash rates, and negative impacts as a result of improvement necessary to achieve LOS C.
- LOS D should be maintained for side roads with volumes exceeding 100 vehicles/hour for a single lane approach (150 vehicles/hour for a two-lane approach) at two-way stop-controlled intersections.

5.2 Level-of-Service Results

The Highway Capacity Manual congestion reports within Synchro (v8), a traffic analysis software package from Trafficware, routinely relied upon by transportation engineering professionals, were used to assess congestion at the study intersections. Figure 15 and Figure 16 present the LOS results at signalized and unsignalized intersections, respectively.

As can be seen below, relatively long delays and Level of Service F conditions exist during the PM peak hour at the Riverside Avenue/Barrett Street/Colchester Avenue intersections and at the US 2/White Street intersection, with or without the addition of site-generated traffic. Delays at all other study area



intersections are projected to remain at acceptable levels and increase by 3 seconds per vehicle or less with the addition of project-generated traffic.

Figure 15: Level-of-Service Results at Signalized Intersections

Signalized Intersections		Level-of-Service Results											
		AM No Build			AM Build			PM No Build			PM Build		
		LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c
	Overall	B	17	0.66	B	18	0.66	C	25	0.62	C	25	0.62
	FR, exiting Riverside Ave	R	17	-	R	17	-	F	58	-	F	58	-
	WB, exiting Mill St	D	41	-	D	41	-	D	40	-	D	40	-
	NB, along Colchester Ave	A	4	-	A	4	-	A	5	-	A	5	-
	SB, along Colchester Ave	C	23	-	C	23	-	B	17	-	R	17	-
	Overall	C	25	0.60	C	25	0.60	F	>100	0.75	F	>100	0.76
	WB, exiting Barrett St	C	21	-	C	22	-	C	29	-	C	29	-
	NB, along Riverside Ave	D	43	-	D	43	-	F	>100	-	F	>100	-
	SB, along Riverside Ave	A	4	-	A	4	-	A	4	-	A	4	-
	Overall	B	18	0.68	C	20	0.69	F	>100	0.82	F	>100	0.83
	EB, from Riverside Ave	A	7	-	A	7	-	A	8	-	A	8	-
	WD, exiting Darrett St	C	74	-	F	84	-	F	>100	-	F	>100	-
	NB, along Colchester Ave	B	19	-	B	20	-	D	43	-	D	43	-
	SB, along Colchester Ave	A	5	-	A	5	-	A	3	-	A	3	-
	Overall	B	17	0.62	B	18	0.66	C	26	0.71	C	27	0.73
	EB, along White St	B	19	-	B	19	-	C	28	-	C	31	-
	WB, along White St	C	30	-	C	31	-	D	51	-	D	53	-
	NB, along Patchen Rd	A	10	-	A	10	-	B	16	-	B	16	-
	SB, along Patchen Rd	B	13	-	B	14	-	B	14	-	B	15	-
	Overall	B	15	0.56	B	15	0.55	F	>100	1.08	F	>100	1.08
	EB, along US 2	A	7	-	A	7	-	F	>100	-	F	>100	-
	WB, along US 2	B	13	-	B	13	-	F	>100	-	F	>100	-
	NB, exiting Midas Drive	D	50	-	D	50	-	F	89	-	F	90	-
	SB, exiting White Street	D	35	-	D	35	-	D	44	-	D	44	-

Figure 16: Level-of-Service Results at Unsignalized Intersections

Unsignalized Intersections		Level-of-Service Results											
		AM No Build			AM Build			PM No Build			PM Build		
		LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c
	EB Through/Right, along Barrett St	A	<1	0.19	A	<1	0.19	A	<1	0.15	A	<1	0.16
	WB Left/Through, along Barrett St	A	2	0.04	A	2	0.04	A	2	0.07	A	2	0.07
	NB Left/Right, exiting Chase St	B	11	0.07	B	11	0.07	B	11	0.19	B	11	0.20
	WB Left/Right, exiting Site Access	B	13	0.04	B	13	0.17	C	18	0.13	C	19	0.16
	NB Through/Right, along Patchen Rd	A	<1	0.16	A	<1	0.15	A	<1	0.30	A	<1	0.34
	SB Left/Through, along Patchen Rd	A	<1	0.01	A	<1	0.01	A	<1	0.01	A	<1	0.03
	WB Left/Right, exiting Kirby Rd	B	14	0.22	B	15	0.23	C	18	0.42	C	20	0.48
	NB Through/Right, along Patchen Rd	A	<1	0.16	A	<1	0.15	A	<1	0.25	A	<1	0.27
	SB Left/Through, along Patchen Rd	A	3	0.09	A	3	0.10	A	2	0.08	A	2	0.08



6.0 QUEUING ANALYSIS

In addition to the congestion analysis, estimated queues were evaluated using SimTraffic (v8).¹ The longest average maximum queues per intersection approach are presented in Figure 17. Relatively long queues currently exist within the Colchester Avenue/Riverside Avenue/Barrett Street triangle of intersections and remain in the build condition.² Afternoon peak hour queues are also relatively long on US 2 and queues of approximately 10 vehicles in length are experienced at the Patchen Road/White Street intersection, but are not expected to increase significantly with the addition of project traffic.

¹ Ten hour-long simulations were averaged together to estimate queue lengths. As each run is different, a difference in a few cars should not be seen as significant.

² Long WB queues on Barrett Street at Chase Street are the by-product of over-congested conditions at the Colchester Avenue/Barrett Street intersection and are not a result of conditions directly at the Barrett Street/Chase Street intersection.



Figure 17: Queuing Results (# vehicles)

		Average Queue Length in Vehicles			
		AM Peak Hour		PM Peak Hour	
		No Build	Build	No Build	Build
Colchester Ave/Riverside Ave					
	EB	3	3	5	4
	WB	0	1	0	0
	NB	0	0	1	1
	SB	39	37	22	27
Riverside Ave/Barrett St					
	WB	2	2	2	2
	NB	13	12	>50	>50
	SB	5	4	4	4
Colchester Ave/Barrett St					
	EB	2	2	2	2
	WB	11	17	29	29
	NB	8	10	>50	>50
	SB	4	3	3	4
Barrett St/Chase St					
	EB	0	0	0	0
	WB	1	2	27	27
	NB	0	0	1	1
Grove St/Site Access					
	WB	1	2	2	1
	NB	0	0	0	0
	SB	0	0	0	1
Patchen Rd/Kirby Rd					
	WB	2	2	3	3
	NB	0	0	0	0
	SB	2	2	2	2
Patchen Rd/White St					
	EB	5	5	8	10
	WB	7	7	10	10
	NB	5	5	9	12
	SB	8	9	8	10
US 2/White St/Midas Dr					
	EB	7	7	54	57
	WB	7	7	>50	>50
	NB	2	3	10	11
	SB	2	2	5	5

7.0 SAFETY ANALYSIS

Crash histories were collected from VTrans (January 2006-December 2010) for the study area. VTrans maintains a statewide database of all reported crashes along all state highways and federal aid road segments.¹ Patterns within the crash data were examined and VTrans designated High Crash Locations (HCLs) were investigated in greater detail.

Based on the most recent *VTrans High Crash Location Report (2006-2010)*², there are three designated High Crash Location (HCL) intersections within the study area.

¹ This data is exempt from discovery or admission under 23 U.S.C. 409.

² This document is exempt from discovery or admission under 23 U.S.C. 409.



In order to be classified as an HCL, an intersection or road section (0.3 mile section) must meet the following two conditions:

1. It must have at least 5 crashes over a 5-year period
2. The Actual Crash Rate must exceed the Critical Crash Rate.

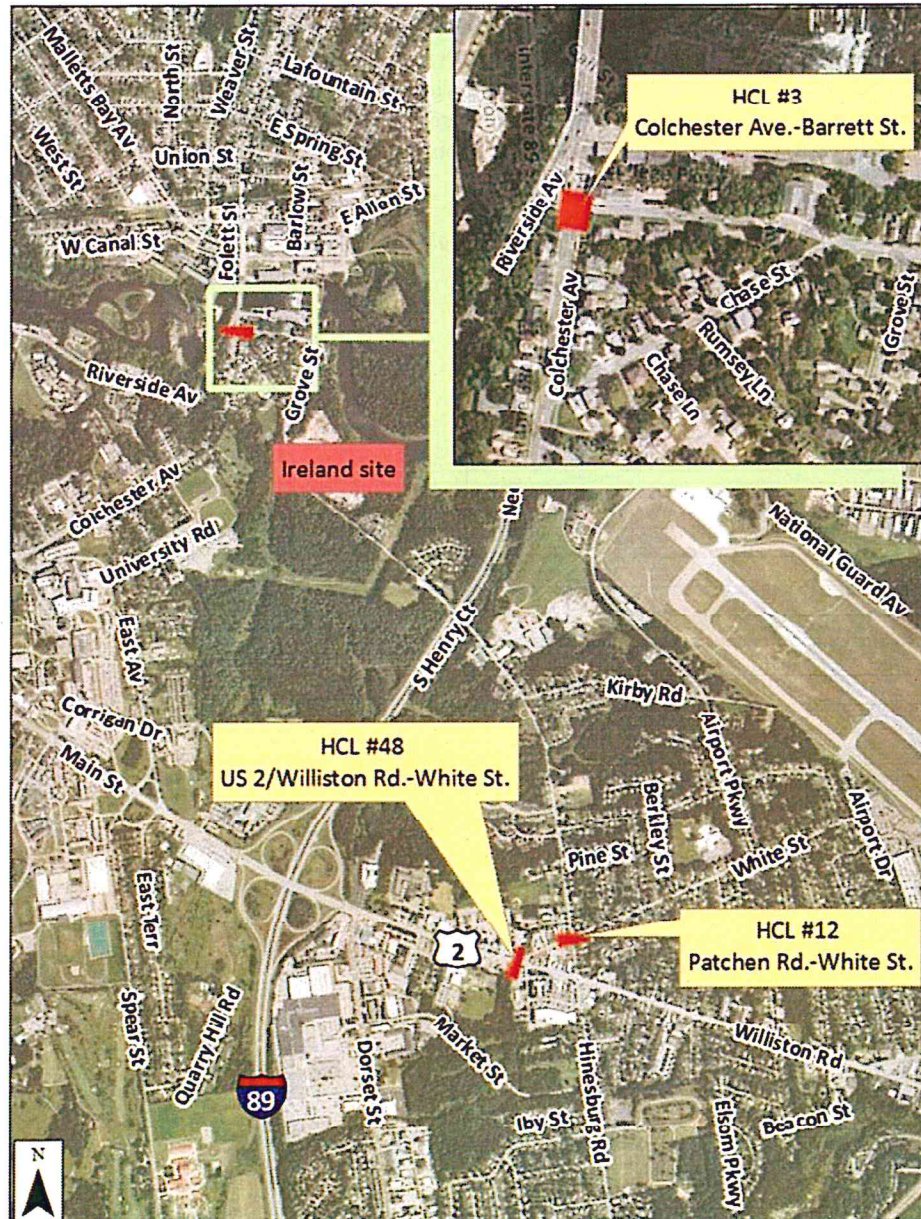
Figure 18 presents the location of the three designated HCLs within the project study area. These include the Colchester Avenue/Barrett Street intersection, the Patchen Road/White Street intersection, and the US 2/White Street intersection. Figure 18 also presents each HCL's rank in the entire VTrans HCL listing, which currently includes 124 HCL intersections statewide.

During the 5 year period of HCL designation (from 2006-2010), there were 15 crashes reported along the entire length of Grove Street in Burlington, and 44 crashes reported along the entire length of Patchen Road in South Burlington. However, aside from the Patchen Road/White Street intersection, no other HCL locations exist along Grove Street or Patchen Road. During this same period there were a total 4 crashes reported in the area of the proposed site access location.¹

¹ The area of influence of the site access intersections is assumed to be within the design stopping sight distance of either access location (155' for a 25 mph roadway).



Figure 18: 2006-2010 HCLs



7.1 Riverside Avenue/Colchester Avenue/Barrett Street

This intersection is the third highest ranked HCL intersection in the state. Out of the 41 reportable crashes cited in the VTrans HCL report, nine involved injuries and the rest were property damage only; there were no fatalities.

In considering this intersection, we broadened our investigation to include crashes at the entire Colchester Avenue/Riverside Avenue triangle, within which there were 88 crashes reported in this same 5 year period. Of these 88 crashes, 13 crashes (15%) resulted in 18 injuries. No crashes resulted in any fatalities.



Weather does not appear to be a factor in crashes as shown in Figure 19 and Figure 21. Most crashes were rear-ends, although there were 17 same direction sideswipes (19%) and 11 left-turn and through conflicts (13%) (Figure 20). After inattention and unknown factors, circumstances that contributed to crashes included disregard for traffic control elements, failure to yield right of way, and following too closely. Following too closely may be the primary cause of the 44 rear end collisions (50%); the same direction sideswipes and left-turn/through conflicts may be attributed to the failure to yield right of way and disregard for traffic control.

Figure 19: Crash Details for the Colchester Ave/Riverside Ave/Barrett St Triangle

Type	Head-On	5
	Left-Turn and Through	11
	Single Vehicle Crash	3
	Through Movement Broadside	2
	Rear End	44
	Same Direction Sideswipe	17
	Other	6
	Total	88

Weather	Clear/Cloudy	61
	Rain	6
	Snow	12
	Sleet/Hail	1
	Unknown	8
	Total	88

Contributing Circumstances	Disregarded traffic signs, signals, road markings	8
	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	4
	Driving too fast for conditions	6
	Failure to keep in proper lane	4
	Followed too closely	8
	Failed to yield right of way	8
	Made an improper turn	4
	Other improper action	5
	Inattention	27
	Operating defective equipment	3
	Visibility obstructed	4
	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway etc	3
	Under the influence of medication/drugs/alcohol	1
	Unknown	18



Figure 20: Types of Crashes at the Colchester Ave/Riverside Ave/Barrett St Triangle

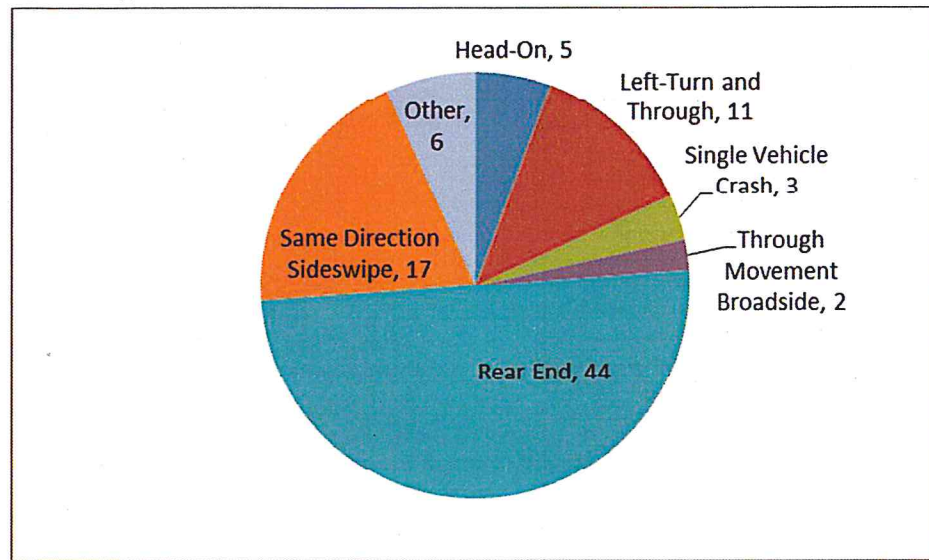
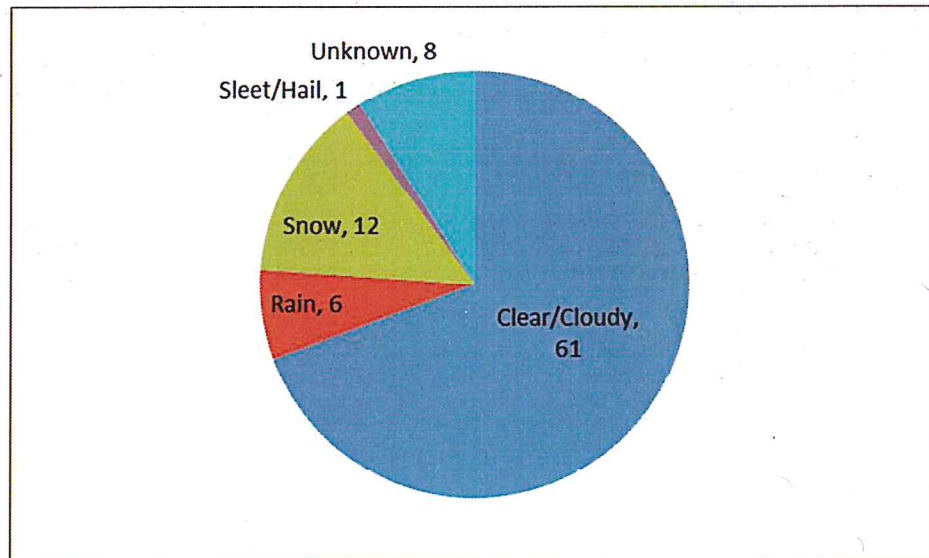


Figure 21: Weather Conditions during Crashes at the Colchester Ave/Riverside Ave/Barrett St Triangle



7.2 Patchen Road/White Street

This intersection is the twelfth highest ranked HCL intersection in the state. Out of the 40 reportable crashes cited in the VTrans HCL report, 6 involved injuries (15%) and the rest were property damage only; there were no fatalities.

Weather does not appear to be a factor in crashes as shown in Figure 22 and Figure 24. Many crashes were rear-ends, although there were 6 through-movement broadsides (15%) and 5 left-turn and through conflicts (13%) (Figure 23). Failure to yield right of way contributed to 10 crashes (25%) and could certainly be the reason there were so many through-movement broadside crashes. However, red-light running ("disregard for traffic signs, etc.") was only cited as a contributing circumstance in one crash.



Figure 22: Crash Details for the Patchen Road/White Street Intersection

Type	Head-On	2
	Left-Turn and Through	5
	Single Vehicle Crash	2
	Through Movement Broadside	6
	Rear End	20
	Same Direction Sideswipe	1
	Other	4
	Total	40

Weather	Clear/Cloudy	34
	Rain	2
	Snow	1
	Unknown	3
	Total	40

Contributing Circumstances	Disregarded traffic signs, signals, road markings	1
	Inattention	12
	Driving too fast for conditions	2
	Failure to keep in proper lane	2
	Followed too closely	6
	Failed to yield right of way	10
	Made an improper turn	2
	Other improper action	2
	Under the influence of medication/drugs/alcohol	2
	Unknown	4

Figure 23: Types of Crashes at the Patchen Road/White St Intersection

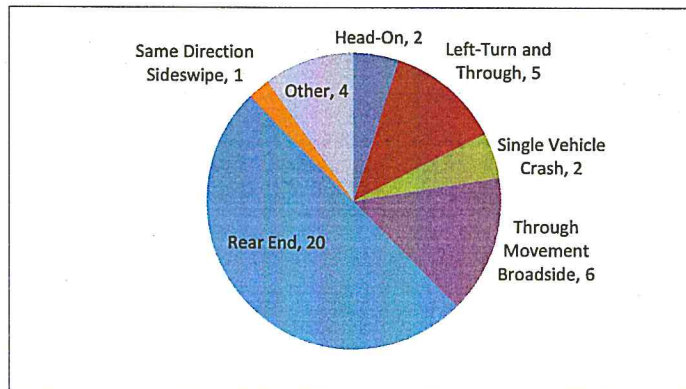
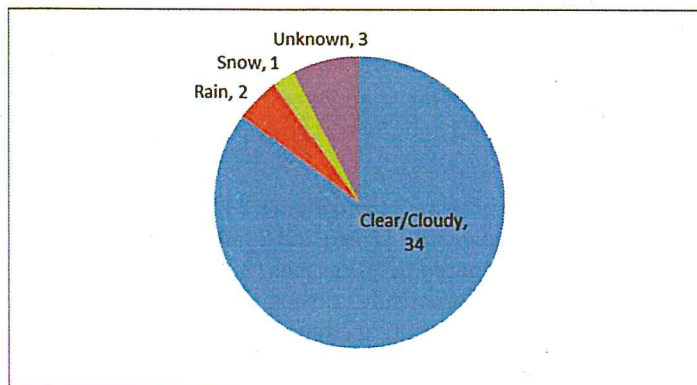


Figure 24: Weather Conditions during Crashes at the Patchen Road-White St Intersection



7.3 US 2/White Street

This intersection is the 48th highest ranked HCL intersection in the state. Out of the 62 reportable crashes cited in the VTrans HCL report, 4 involved injuries (7%) and the rest were property damage only; there were no fatalities.

Weather does not appear to be a factor in crashes as shown in Figure 25 and Figure 27. Most crashes were rear-ends, although there were 12 same direction sideswipes (19%), (Figure 26). After inattention, following too closely was the most frequently cited circumstance that contributed to crashes. It would easily be suspected that "failure to keep in proper lane" would be the primary reason for 12 same direction sideswipes (19%), but this was only cited in four crashes, so "inattention" may be the reason for these.

Figure 25: Crash Details for the US 2/White Street Intersection

Left-Turn and Through	6
Single Vehicle Crash	1
Through Movement Broadside	3
Rear End	33
Same Direction Sideswipe	12
Other	7
Total	62

Weather	Clear/Cloudy	48
	Rain	10
	Sleet/Hail	2
	Unknown	2
	Total	62

Contributing Circumstances	Disregarded traffic signs, signals, road markings	1
	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	3
	Failure to keep in proper lane	4
	Followed too closely	20
	Failed to yield right of way	12
	Made an improper turn	3
	Other improper action	4
	Inattention	26
	Visibility obstructed	3
	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway etc	3
	Under the influence of medication/drugs/alcohol	1
	Unknown	6



Figure 26: Types of Crashes at the US2/ White St Intersection

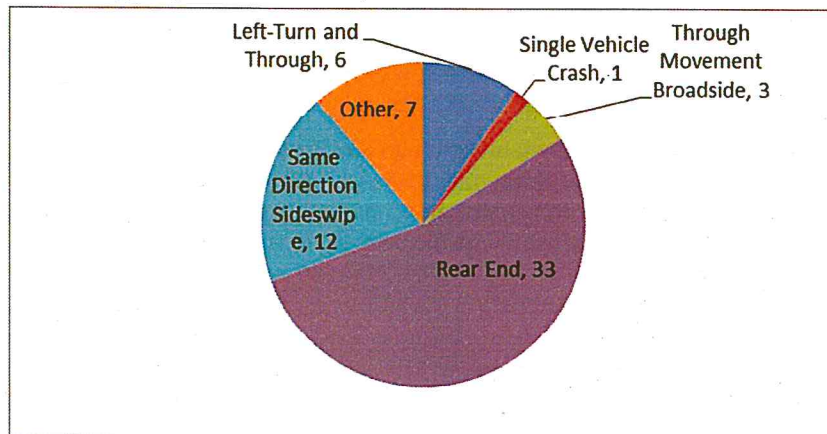
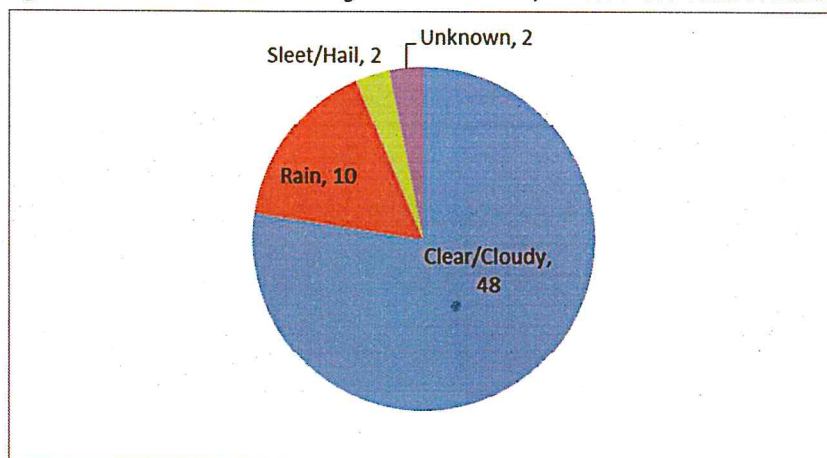


Figure 27: Weather Conditions during Crashes at the US2/Williston Road-White St Intersection



7.4 Sight Distance Assessment

As defined in the 2011 publication *A Policy on Geometric Design of Highways and Streets*, from the American Association of State Highway and Transportation Officials (AASHTO), sight distance is the “the length of roadway ahead that is visible to the driver.”¹ Sight distances of sufficient length are necessary at all points along a roadway to ensure vehicles can safely stop or avoid colliding with potential obstructions or other vehicles on the roadway.

Standard practice in assessing intersection safety and operations involves measuring two separate sight distances – **stopping sight distance** and **intersection sight distance**.

7.4.1.1 Stopping Sight Distance

Stopping sight distance is the visible distance along a roadway between an advancing motorist and a potential obstacle in the roadway. It is measured from a point representing the approaching driver's eye and a point representing an obstacle in the roadway.² Stopping sight distances of adequate length are needed along all roadways, both at and away from intersections, so that drivers travelling at design speeds can react to potential obstacles and safely brake to avoid collisions. Design minimum stopping sight distances are calculated based on factors such as design speed, response times, and grades as reported in the *2011 Policy on Geometric Design of Highways and Streets*.³

At the project access, Grove Street has a posted speed limit of 25 mph and is relatively flat. The design minimum stopping sight distances at the project access is 155 feet.

Stopping sight distances both north and south of the project access were measured in the field and were found to be at least 400 feet north and south of the proposed access location, exceeding the design standard.

7.4.1.2 Intersection Sight Distance

Intersection sight distance is the distance available along the major road travelled way corresponding with the maximum visibility between an advancing motorist on the major road and an entering motorist on an intersecting minor road. It is measured between a point representing the advancing driver's eye above the major road and the entering driver's eye above the intersecting road.⁴

The *2011 Policy on Geometric Design of Highways and Streets* states that the available intersection sight distance should be at least equal to the required stopping sight distance along the major road, which in this case equals 155 feet.

“Sight distance is also provided at intersections to allow the drivers of stopped vehicles a sufficient view of the intersecting highway to decide when to enter the intersecting highway or to cross it. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate

¹ American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, Fifth Edition (Washington D.C.: American Association of State Highway and Transportation Officials, 2011). Page 3-2.

² As noted in the *2011 Policy on Geometric Design of Highways and Streets* (page 3-14 to 3-15), the height of the driver's eye is assumed to be 3.5' above the road surface and the height of a potential obstacle is 2.0' above the road surface.

³ American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, Fifth Edition (Washington D.C.: American Association of State Highway and Transportation Officials, 2011). Page 3-5.

⁴ As noted in the *2011 Policy on Geometric Design of Highways and Streets* (page 3-14 to 3-15), the height of the driver's eye of the approaching vehicle is assumed to be 3.5' above the road surface of the major road and the height of the driver's eye of the entering vehicle is assumed to be 3.5' above the minor road surface and 14.5' back from the edge of the major road travelled way. VTrans standard B-71 suggest the entering driver's eye should be measured 15' back from the edge of the major road travelled way and we have followed this practice in our measurements.



stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions.”¹

However, when possible it is desirable to have intersection sight distances that exceed the design minimum stopping sight distances in order to offer improved operations, such that major road traffic need not decelerate to accommodate entering traffic.

“However, in some cases a major-road vehicle may need to stop or slow to accommodate the maneuver by a minor road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.”²

Desirable target intersection sight distances are based on design speeds. For the section of Grove Street proximate to the project access, the design target intersection sight distance in either direction is 280 feet.

Intersection sight distances both north and south of the project access were measured in the field and were found to be at least 400 feet north and south of the proposed access location, exceeding both the design standard and desired target distance (Figure 28).

¹ American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, Fifth Edition (Washington D.C.: American Association of State Highway and Transportation Officials, 2011). Page 9-29

² American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, Fifth Edition (Washington D.C.: American Association of State Highway and Transportation Officials, 2011). Page 9-29



N

0 100 200 400 Feet

Site Driveway (approximately)

525'

400'

Source: Esri, DigitalGlobe, GeoEye, IGN, USDA, USGS, ANU, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

In assessing the proposed site access, we conducted a turn lane warrant analysis to determine if projected peak hour traffic volumes are sufficient to meet warrant thresholds for construction of a dedicated left-turn lane into the site. Dedicated left-turn lanes have the safety and capacity benefits of removing left-turning traffic from the through volume traffic stream but also promote higher vehicle speeds and require increased pavement widths.

We also examined left-turn lane warrants using a second methodology developed by Kikuchi and Chakroborty (1991), which modified the Harmelink equation to correct errors in its application of queuing theory.¹ This method provided identical results to the Harmelink method.



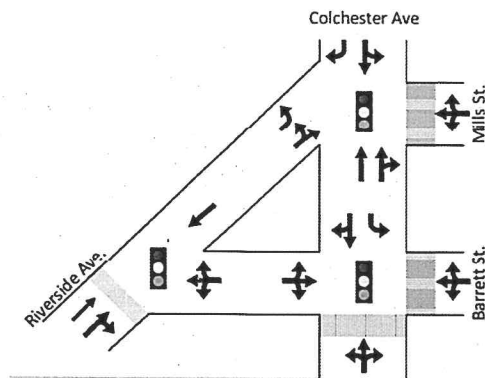
Based on this analysis we believe the proposed access configuration will effectively accommodate site generate traffic and do not recommend any additional turn lanes be constructed.

8.0 PLANNED ROADWAY IMPROVEMENTS

8.1 Colchester Avenue Corridor Plan

In 2011, RSG completed the *Colchester Avenue Corridor Plan* for the Chittenden County Regional Planning Commission (CCRPC).¹ This plan included recommendations for the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle, noting that the close spacing of the three traffic signals creates multiple conflict points and inefficiencies for vehicles, pedestrians, and bicyclists (Figure 29). To mitigate these issues, the Plan recommended consolidating the vehicle movements into one signalized intersection realigning Riverside Avenue to intersect Colchester Avenue directly opposite Barrett Street, and replacing the signal at Mill Street with a stop sign (Figure 30).

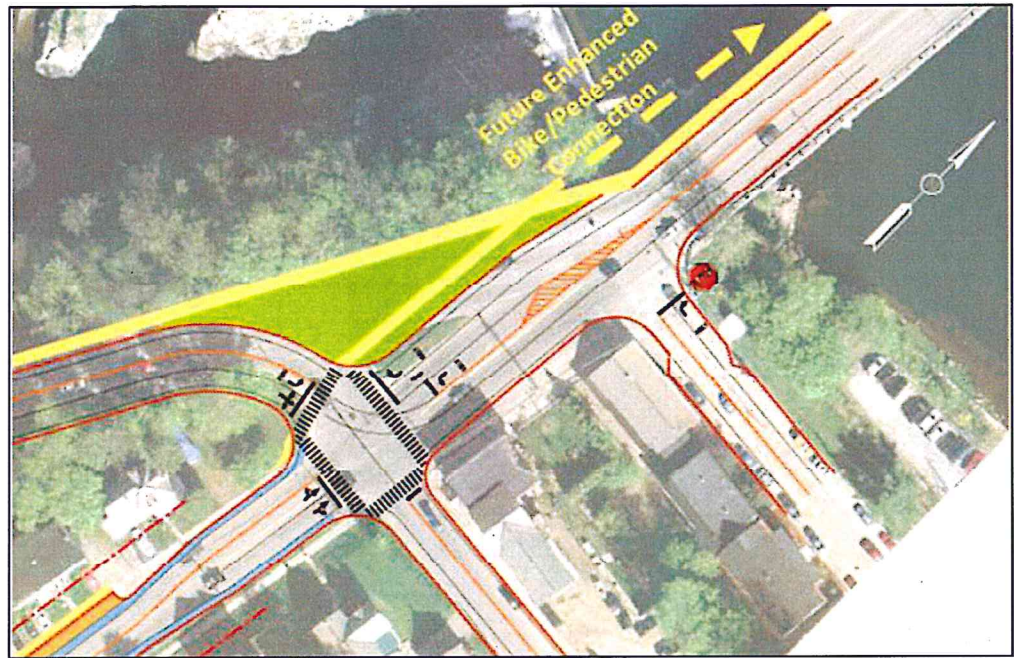
Figure 29: Existing Configuration at the Colchester Avenue/Riverside Avenue Triangle



¹ http://www.ccrpcvt.org/library/colchester_ave/20111219_Colchester_Ave_Corridor_Plan_Final.pdf



Figure 30: Proposed Consolidation Recommended in Colchester Avenue Corridor Plan



The Plan also recommends considering traffic calming measures for Chase Street, which is used as a cut-through for traffic between Colchester Avenue and Grove Street. Any traffic calming plan should follow the Burlington Traffic Calming and Neighborhood Enhancement Program process to gather input from neighbors and evaluate advantages and disadvantages.

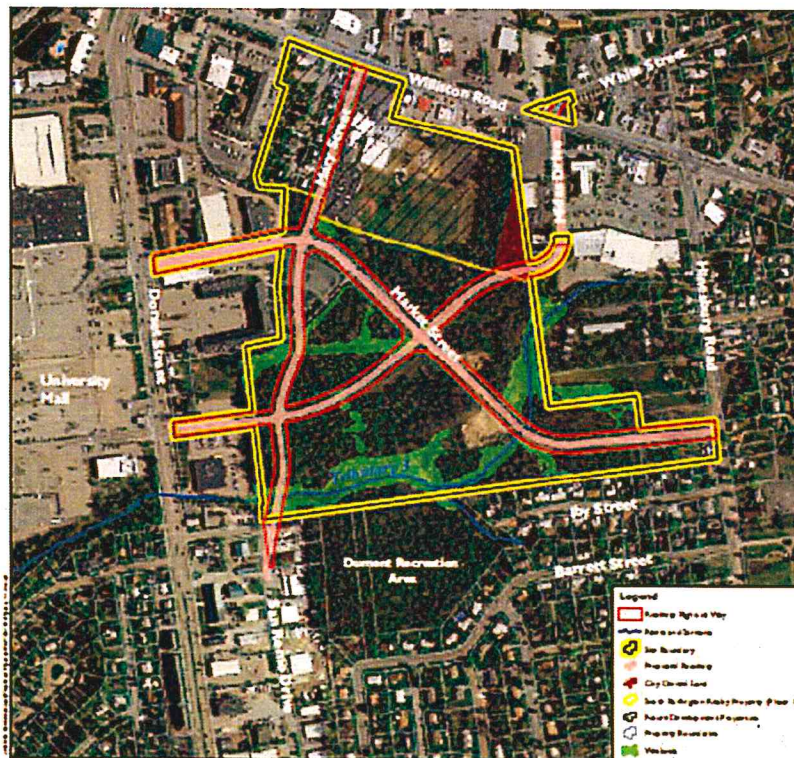
8.2 Market Street Improvements

As part of the South Burlington City Center project, a new street connection is planned between Dorset Street and US 2 by connecting the existing Market Street with Midas Drive. Figure 31 presents the proposed street configuration, which includes a realignment of the US 2/White Street intersection, bringing White Street in alignment opposite Midas Drive, and construction of left-turn lanes on US 2. This configuration is intended to improve safety and operations at the intersection by eliminating the existing off-set White Street and Midas Drive approaches and by adding protected exclusive left-turn lanes on US 2. Improvements along Market Street are currently slated for fiscal year 2016 in the 2013-2016 CCRPC Transportation Improvement Program (TIP). Full improvements at the US 2/White Street intersection, are currently planned but are not yet included in the near term Transportation Improvement Program.

Figure 31: Proposed Roadway Alignment from Market Street Improvements¹

¹ Market Street improvement layout was taken from the *South Burlington, Market Street Improvements STP 5200 (17) Revised Environmental Assessment*, VHB, May 2010.





0 250 500 Feet
Kierulff Associates, Inc. (1111)

Figure 1.1-2

Proposed Street Layout

Market Street Improvements
South Burlington, Vermont

Source:
Digital Orthophoto is aerial as of 2003
by NADP and the Rural by VDOT
Aerials from Google Earth

Figure 32: Recommended
Pedestrian Warning Signs
(MUTCD W11-2 and
W16-7P)



8.3 Grove Street Traffic Calming and Pedestrian Improvements

The proposed project site plan includes reconfiguration of the site access and additional off-site roadway improvements in the area adjacent to the Grove Street/Site Access intersections. These improvements include construction of new sidewalk connections both north and south of the project site, new and repainted crosswalks, a new raised center island south of the project access, installation of a solar powered speed monitoring sign, relocation of an existing no parking sign on Grove Street south of Barrett Street, new curbing, and better designation of paved public parking. These enhancements, as proposed by O'Leary Burke Civil Associates, are presented in (Figure 33 and Figure 35).

These off-site improvements provide enhanced pedestrian connectivity between the project and existing pedestrian infrastructure in the area and improve the overall pedestrian environment in this area. They provide a critical pedestrian connection to the south by linking existing sidewalks in South Burlington with sidewalks in Burlington and Winooski. In addition to the pedestrian improvements called out below, we recommend the existing pedestrian warning signs at the north end of the paved public parking area be upgraded to new fluorescent yellow signs (W11-2) with diagonal arrows (W16-7P) indicating the crosswalk location, and that these be gate posted on either side of the crosswalk facing both northbound and southbound grove street traffic. We suggest similar signage be installed at the second crossing approximately 300 feet north of this parking area at the north end of the park.



Figure 33: Off-Site Pedestrian Improvements – South of Site

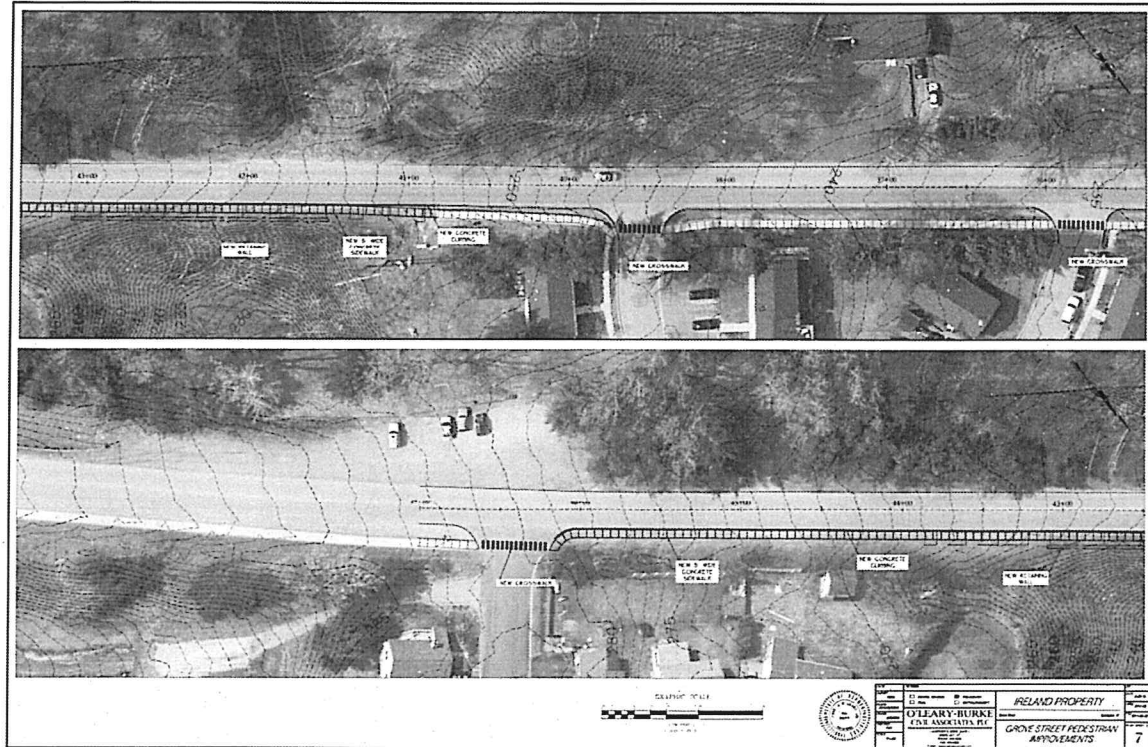
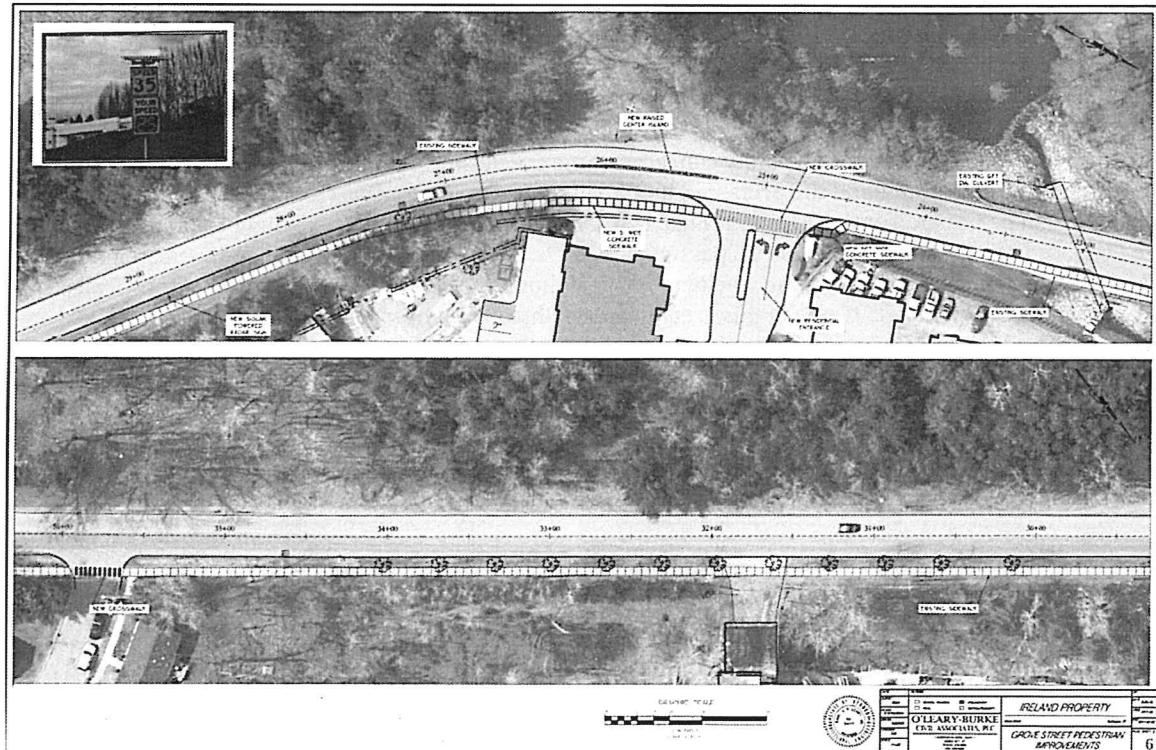


Figure 34: Off-Site Pedestrian Improvements – Adjacent to Site



[illegible]

9.1 Colchester Avenue/Riverside Avenue/Barrett Street

² The December 2011 Colchester Avenue Corridor Plan, conducted by Resource Systems Group indicated an approximate project cost of \$1.4 million to reconstruct the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle. Applying the peak hour percent increase in traffic associated with the proposed project (highest during the PM peak hour at 0.43%) to the estimated project cost results in a proportional project share of approximately \$6,000.

9.2 US 2/White Street Intersection

The US 2/White Street intersection is currently slated for major improvements that will realign White Street opposite Midas Drive and will add left-turn lanes on US 2. These improvements are anticipated to improve overall intersection operations and safety. Improvements along Market Street are currently slated for fiscal year 2016 in the 2013-2016 CCRPC Transportation Improvement Program (TIP). Full improvements at the US 2/White Street intersection, are currently planned but are not yet included in the near term Transportation Improvement Program. The proposed project is expected to increase overall intersection volumes at this intersection by 0.41% during the weekday AM peak hour (a net increase of 10 vehicle trips) and by 0.38% during the weekday PM peak hour (a net increase of 13 vehicle trips).¹

9.3 Patchen Road/White Street Intersection

At the Patchen Road/White Street intersection, overall LOS B is maintained during the weekday AM peak hour and overall LOS C is maintained during the weekday PM peak hour with the addition of project generated traffic. However, historic crash data indicates this area is a High Crash Location and intersection improvements here could improve overall operations and safety. Suggested Federal Highway Administration guidelines for determining if a protected left-turn phase is warranted at a signalized intersection state that if the product of the hourly left-turn volume and the hourly opposing volume exceeds 50,000, and there are more than 2 left-turn vehicles per cycle during that peak hour (or roughly more than 100 left-turns per hour) a protected left-turn phase should be considered.² At this intersection, both the eastbound left and westbound left turn movements exceed 100 left-turns per hour during the PM peak hour. However, the product of left-turn and opposing traffic is less than 50,000 for both approaches (~43,000 for the westbound approach and ~26,000 for the eastbound approach). The FHWA guidelines further indicate if 5 or more crashes involving left-turning vehicles occur within a 12 month period, a protected left-turn phase should also be considered. However, at this intersection there were 5 crashes involving left-turning vehicles in an entire 5 year period, rather than in any single year. While future conditions may indicate the addition of eastbound and westbound left-turn lanes and left-turn phasing is necessary, currently projected Build scenario volumes do not meet the recommended guidelines at this time. Additionally, the highest frequency crash type at this intersection was a rear-end collision, which comprised 20 of the 40 total crashes in the past 5 years of available data. Due to the high prevalence of rear-end collisions at this intersection we recommend advance intersection warning signs (MUTCD W3-3) be installed on the eastbound and westbound White Street approaches to this intersection. Similar signs currently exist on the northbound and southbound, Patchen Road approaches.

Figure 36: Recommended Warning Sign for White Street Approaches to Patchen Road/White Street Intersection



The proposed project is expected to increase traffic volumes at the Patchen Road/White Street intersection by approximately 3% during the weekday AM and PM peak hours.

¹ The August 2007 US 2 Corridor Study, conducted by Resource Systems Group indicated an approximate project cost of \$3.94 million to reconstruct the US 2/White Street and US 2/Patchen Road intersections. Applying the peak hour percent increase in traffic associated with the proposed project (highest during the AM peak hour at 0.41%) to the estimated project cost results in a proportional project share of approximately \$16,000.

² *Signalized Intersections: Informational Guide*, Federal Highway Administration, Publication No. FHWA-HRT-04-091, 2004. Table 118



10.0 IMPACT FEE CALCULATIONS

Within the City of Burlington new development projects are subject to various impact fees intended to help offset the costs associated with construction and maintenance of public infrastructure. Applying the proposed project's overall square footage of new housing (291,250 square feet) to the City's traffic impact fee calculator¹, we calculate traffic impact fees of approximately \$53,600 for this project.

11.0 CONCLUSIONS AND RECOMMENDED MITIGATION MEASURES

11.1 Conclusions

9. The proposed Grove Street housing project would replace the existing SD Ireland concrete batch plant on Grove Street in Burlington, Vermont with a 247 unit apartment development.
10. Using trip generation rates presented by the Institute of Transportation Engineers (ITE) for this land use, we calculate this project would generate approximately 125 new vehicle trips during the AM peak hour (25 entering and 100 exiting) and 154 vehicle trips during the PM peak hour (100 entering and 54 exiting).
11. Removal of the existing SD Ireland concrete plant will result in a reduction of existing concrete plant traffic, including heavy vehicle and passenger car traffic, in this area. Based on average production levels and existing administrative operations at the plant, we expect this project to eliminate approximately 61 existing AM peak hour trips (41 entering and 20 exiting) and approximately 61 existing PM peak hour trips (22 entering and 39 exiting) from the local roadways.
12. Long delays and Level of Service F conditions exist at the Riverside Avenue/Barrett Street and Colchester Avenue/Barrett Street intersections and at the US 2/White Street intersection, with or without the addition of site-generated traffic. Delays at all other study area intersections are projected to remain at acceptable levels and increase by fewer than 5 seconds per vehicle with the addition of project generated traffic.
13. A review of historic VTrans crash data identified three High Crash Locations within the study area at the Colchester Avenue/Barrett Street intersection, at the Patchen Road/White Street intersection, and at the US 2/White Street intersection.
14. RSG recently conducted the Colchester Avenue Corridor study as a planning document for the Chittenden County Regional Planning Commission and identified a preferred alternative for reconstructing the Colchester Avenue/Riverside Avenue intersection triangle and we recommend this improvement be pursued to improve both operations and safety in this area, with or without the proposed project.
15. At the US 2/White Street intersection, major improvements are currently planned as part of the City Center initiative and Market Street improvements project. Improvements on Market Street are currently slated for fiscal year 2016 in the 2013-2016 CCRPC Transportation Improvement Program (TIP). Full improvements at the US 2/White Street intersection, are currently planned but are not yet included in the near term Transportation Improvement Program.
16. At the Patchen Road/White Street intersection overall LOS B and LOS C conditions are maintained during the weekday AM and PM peak hours, respectively, with the addition of project generated traffic.

¹ <http://www.burlingtonvt.gov/Content.aspx?id=2321>



17. Using the City of Burlington's impact fee calculator, we calculate approximately \$53,600 in traffic impact fees to be associated with the proposed project.
18. We have also examined the proposed site access on Grove Street and have found that stopping and corner sight distances exceed design standards in both directions.
19. We conducted a turn-lane warrant assessment and found that a dedicated left-turn lane is not warranted on Grove Street at the site access.
20. We project average vehicle delays of less than 20 seconds per vehicle for traffic exiting the site driveway and expect the access to operate safely and effectively.
21. We have examined plans for proposed off-site traffic calming and pedestrian accommodation improvements prepared by O'Leary Burke Civil Associates including new sidewalks, crosswalks, new curbing, new lighting, and a proposed solar powered speed feedback display.
22. We believe the proposed pedestrian improvements greatly enhance the existing infrastructure. The proposed sidewalk section south of the project site provides a critical pedestrian link between South Burlington and Burlington and Winooski, creating a continuous pedestrian route between these areas. Additionally, improved curbing signage and striping at crossings north of the project site will help improve pedestrian safety for all pedestrians in the area.

11.2 Recommended Mitigation Measures

23. We recommend a cost sharing allocation be paid by the developer to the City of Burlington towards eventual improvements at the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.43% during the PM peak) and the estimated project cost (\$1.4 million)¹, we calculate a fair share contribution of approximately \$6,000.
24. We recommend a cost sharing allocation be paid by the developer to the City of South Burlington towards eventual improvements at the US 2/White Street intersection. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission based on heavy use by existing traffic. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.41% during the AM peak) and the estimated project cost (\$3.94 million)², we calculate a fair share contribution of approximately \$16,000.
25. Due to the high prevalence of rear-end collisions at the Patchen Road/White Street intersection we recommend advance intersection warning signs (MUTCD W3-3) be installed on both the eastbound and westbound, White Street, approaches to this intersection. Similar signs already exist on the northbound and southbound, Patchen Road approaches (Figure 36).

¹ The December 2011 Colchester Avenue Corridor Plan, conducted by Resource Systems Group indicated an approximate project cost of \$1.4 million to reconstruct the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle.

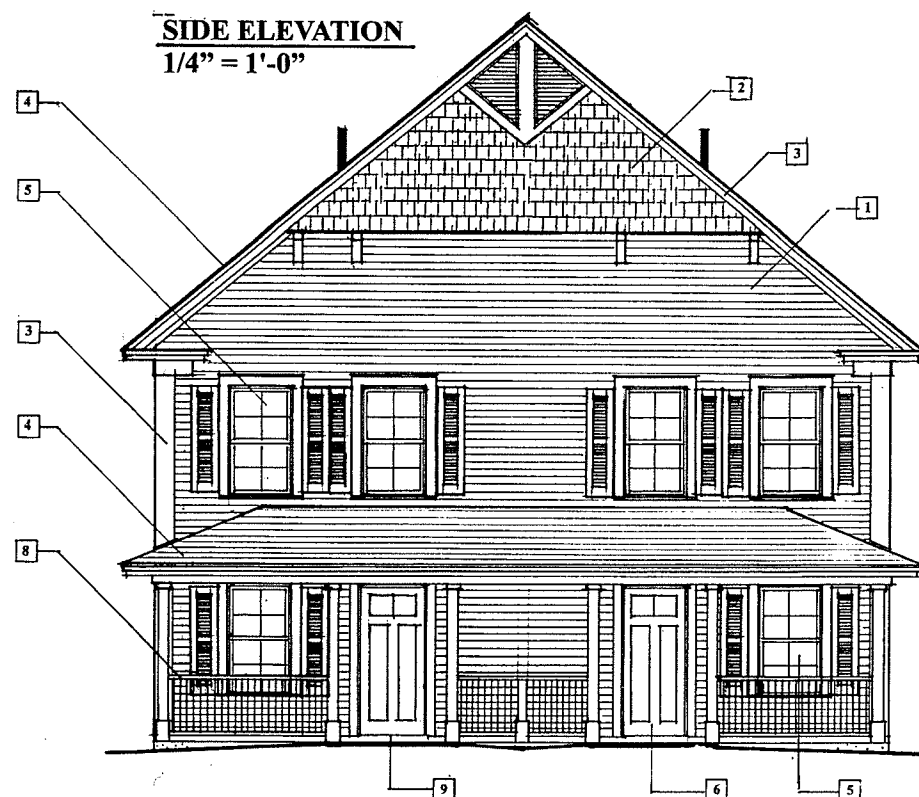
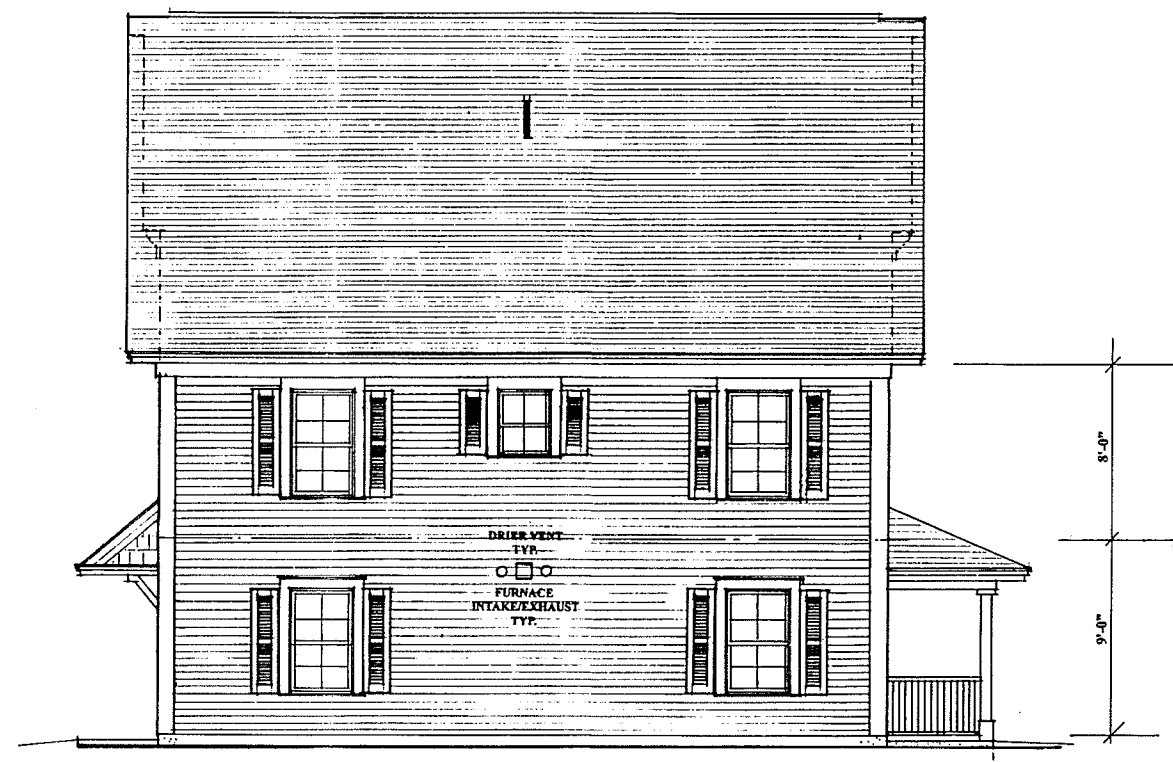
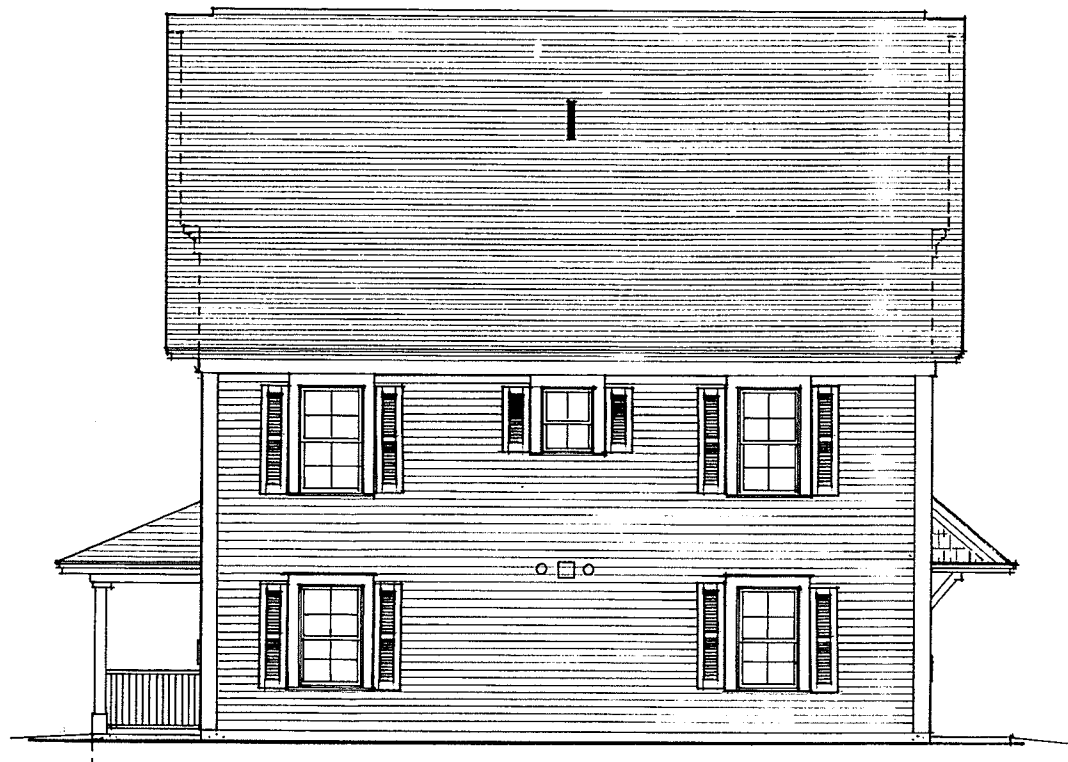
² The August 2007 US 2 Corridor Study, conducted by Resource Systems Group indicated an approximate project cost of \$3.94 million to reconstruct the US 2/White Street and US 2/Patchen Road intersections.



26. To enhance pedestrian connectivity and to improve pedestrian accommodations proximate to the project site, we recommend all off-site traffic calming and pedestrian enhancements identified by O'Leary Burke Civil Associates be installed prior to the first certificate of occupancy for the project.
27. In addition to the pedestrian enhancements proposed by O'Leary Burke Civil Associates we recommend the existing pedestrian warning signs at the crosswalk on Grove Street north of the paved public parking area (north of the project access) be upgraded to new fluorescent yellow warning signs (W11-2) and be accompanied by diagonal arrows indicating the crossing location (W16-7P) and that these signs be gate-posted for both northbound and southbound traffic prior to the first certificate of occupancy for the project. We recommend similar signage be installed at the second pedestrian crossing approximately 300 feet north of this parking area at the north end of the park.
28. Due to the tight turning radius for the southbound right-turn from Barrett Street onto Grove Street, we recommend the "No Parking Here To Corner" sign be relocated as indicated by O'Leary Burke Civil Associates, assuming Burlington Public Works is willing to accept the associated reduction in on-street parking.

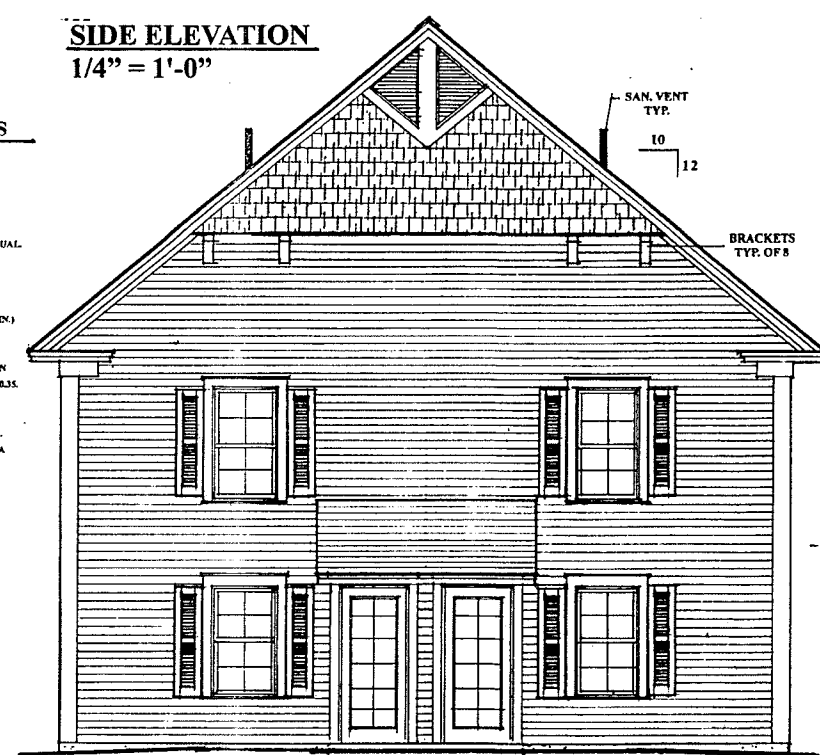
In conclusion, we believe that if the above recommendations are followed, traffic associated with construction of the proposed Grove Street housing project will not cause unreasonable congestion or unsafe conditions on the surrounding road network.





DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|---|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL "SHINGLE" SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |



SIDE ELEVATION
1/4" = 1'-0"

SIDE ELEVATION
1/4" = 1'-0"

FRONT ELEVATION
1/4" = 1'-0"

REAR ELEVATION
1/4" = 1'-0"



NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

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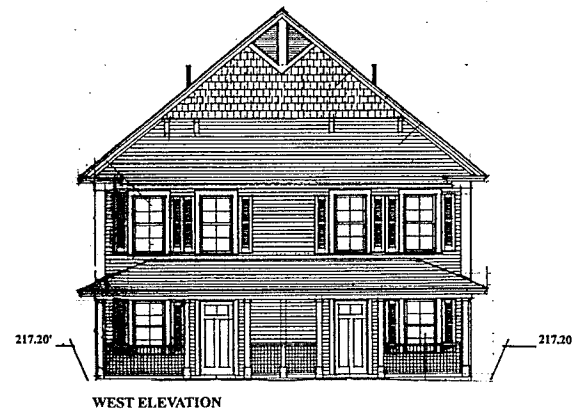
ELEVATIONS OF BUILDINGS
A, B, C, D, E, F, G, H, O AND P

MICHAEL DUGAN
ARCHITECT
VERMONT
100 N. MAIN ST. SUITE 200
BURLINGTON, VT 05401
(802) 255-1234
www.michaelduganarchitect.com

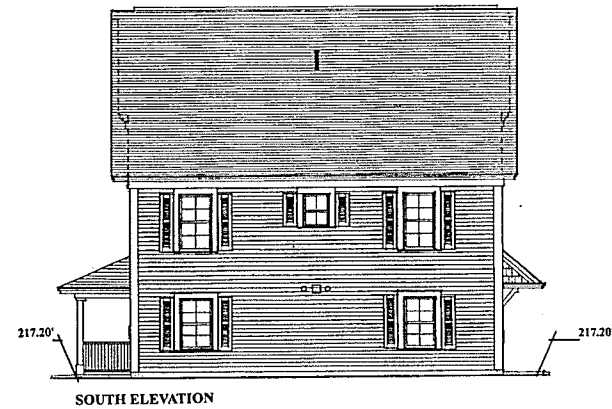
GARDEN STREET APARTMENTS
DUPLEX BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

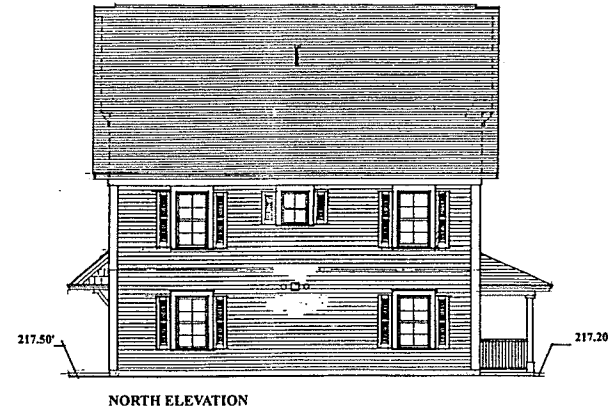
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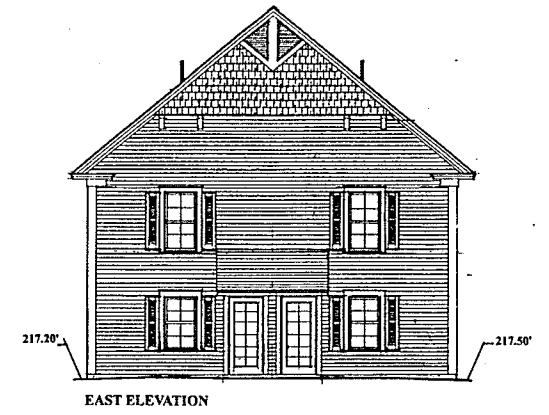
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SOUTH ELEVATION

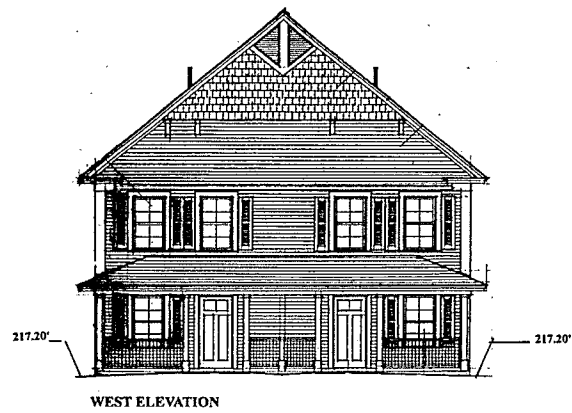


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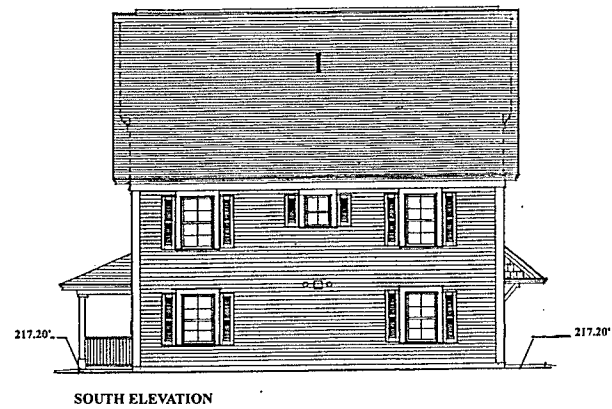


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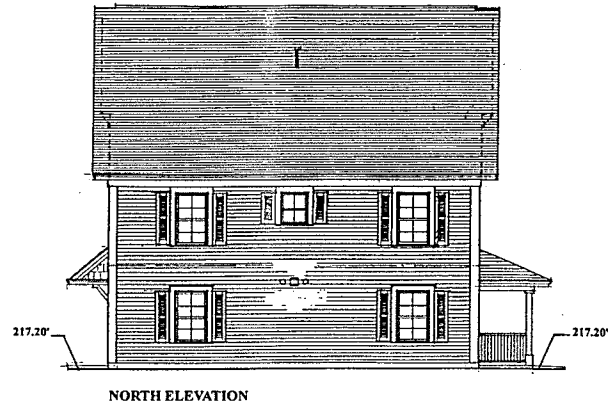
BUILDING A
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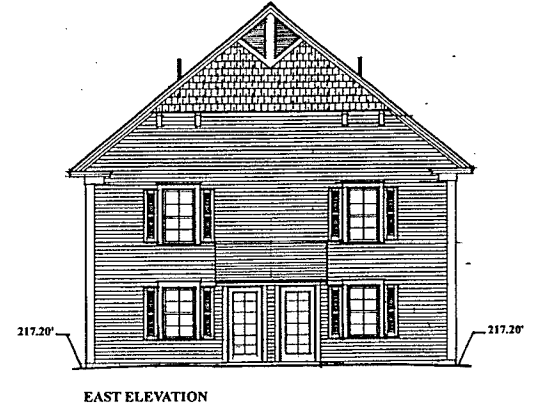
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SOUTH ELEVATION

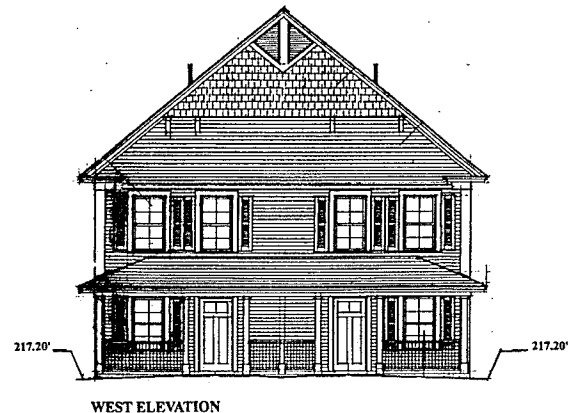


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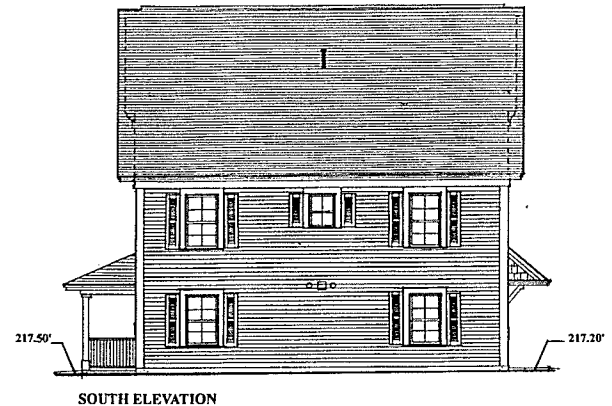


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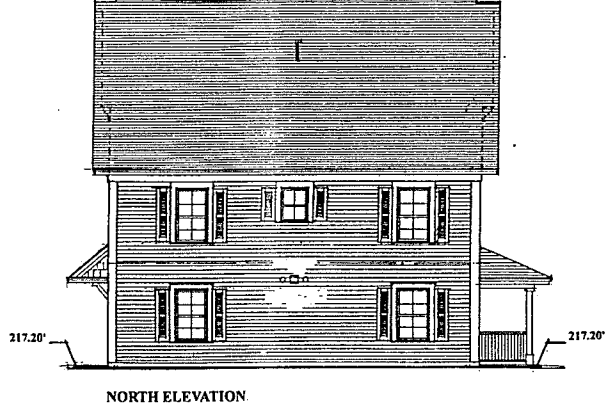
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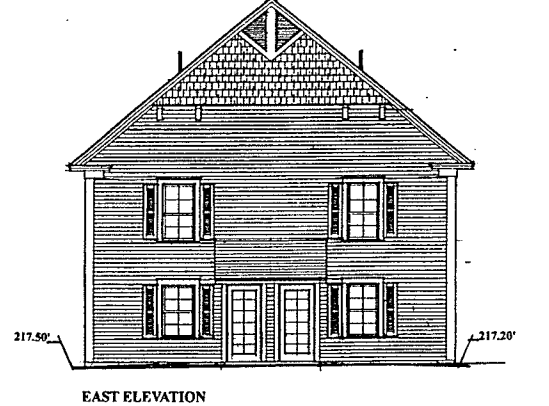
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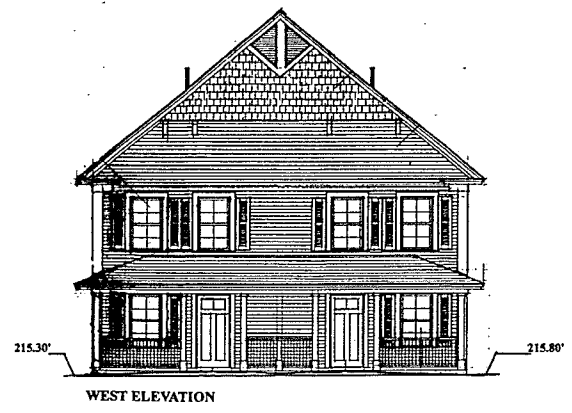


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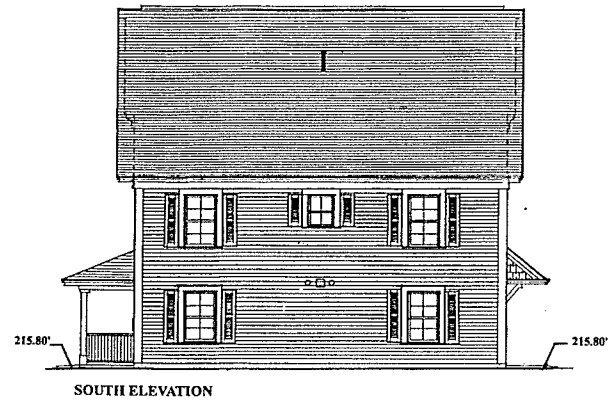


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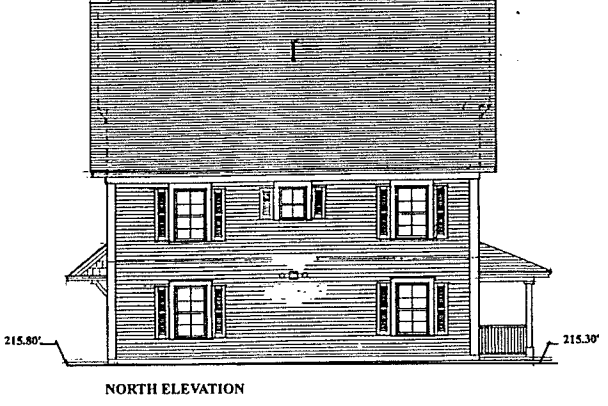
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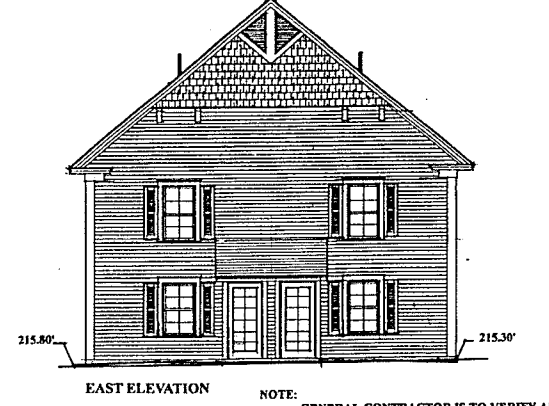
WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION

BUILDING D
FFE=216.03'

NOTE:
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FINISHED GRADE ELEVATIONS
FOR
BUILDINGS A, B, C & D

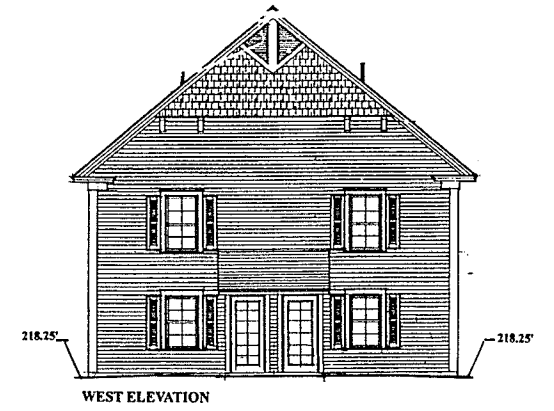
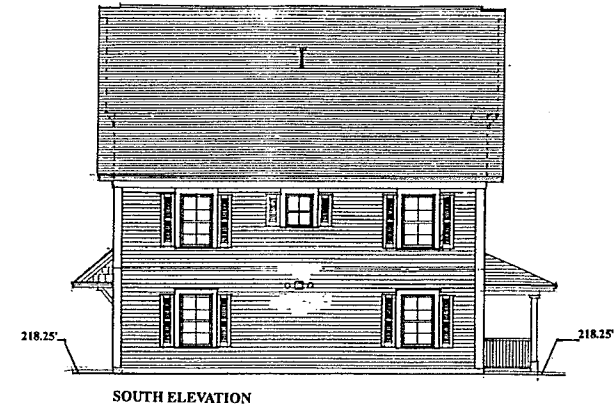
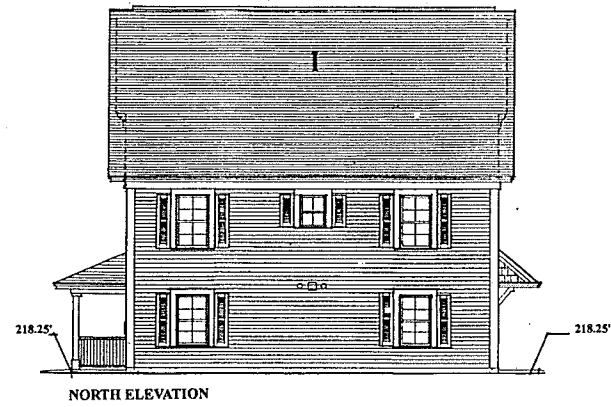
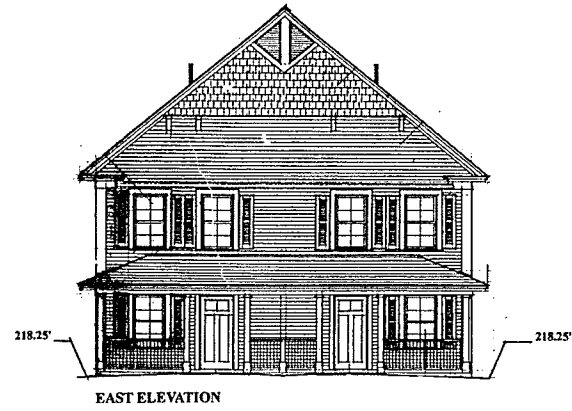
MICHAEL DUGAN
ARCHITECT
VERMONT
STATE OF VERMONT
No. 107
2017

GARDEN STREET APARTMENTS
DUPLEX BUILDING
GARDEN STREET
BURLINGTON VERMONT

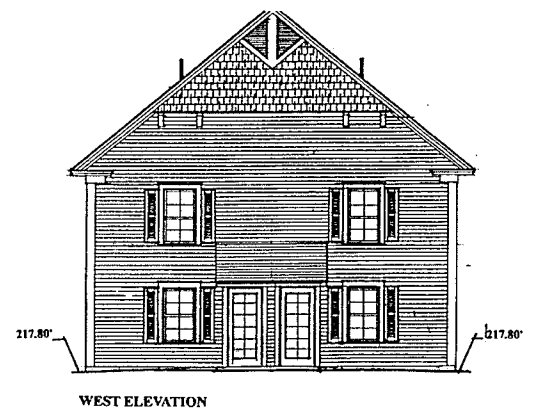
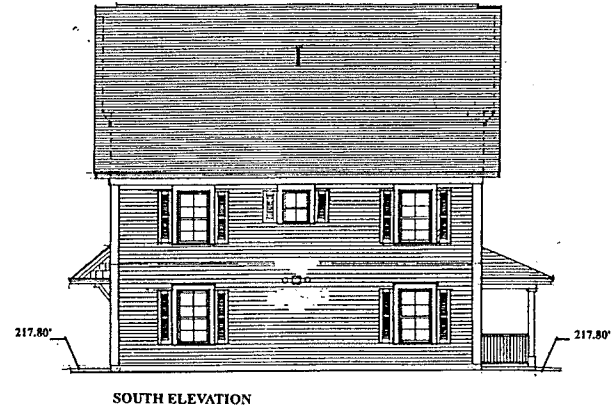
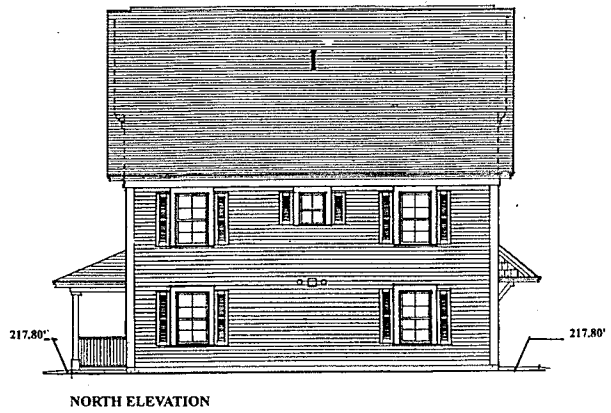
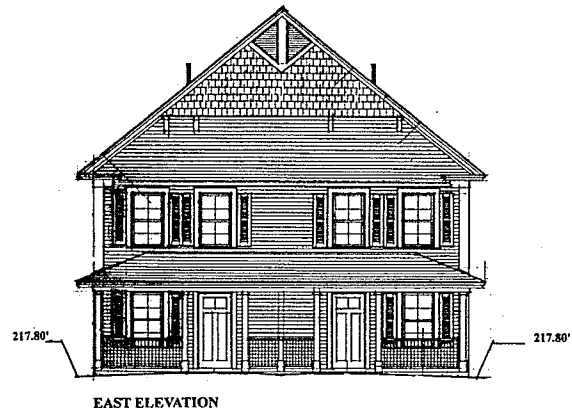


FEBRUARY 16, 2015

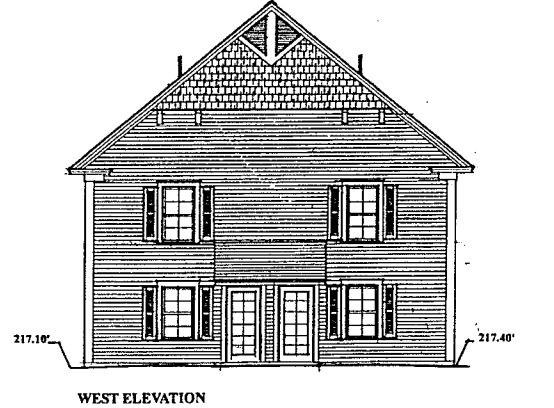
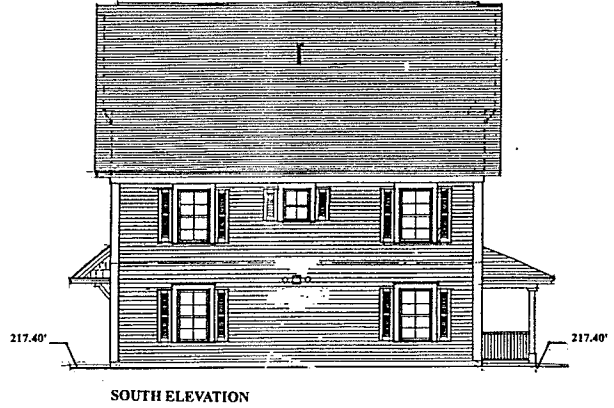
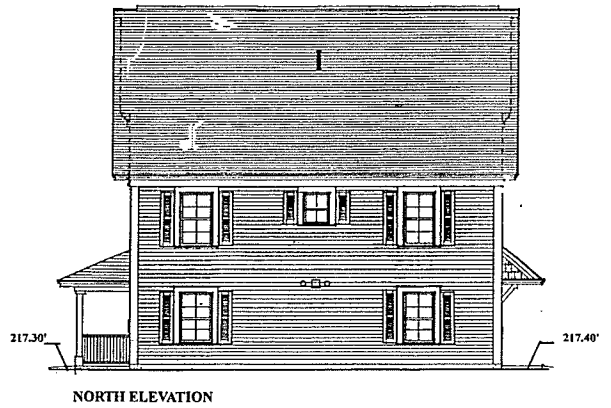
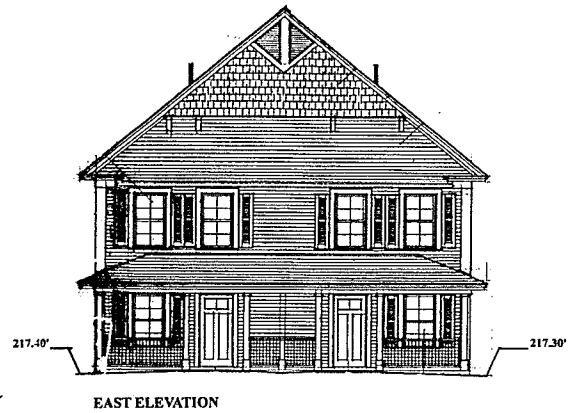
A-1.1



BUILDING F
FFE=218.50'



BUILDING G
FFE=218.00'



BUILDING H
FFE=217.50'

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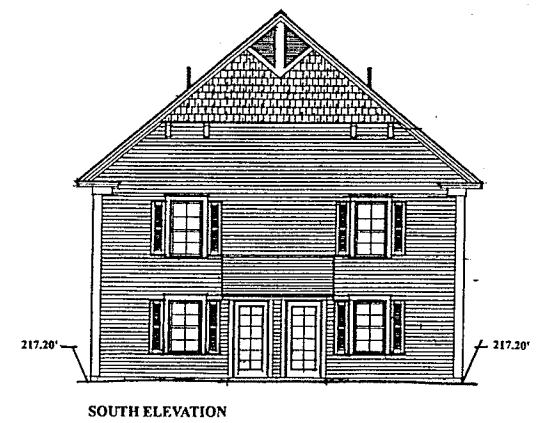
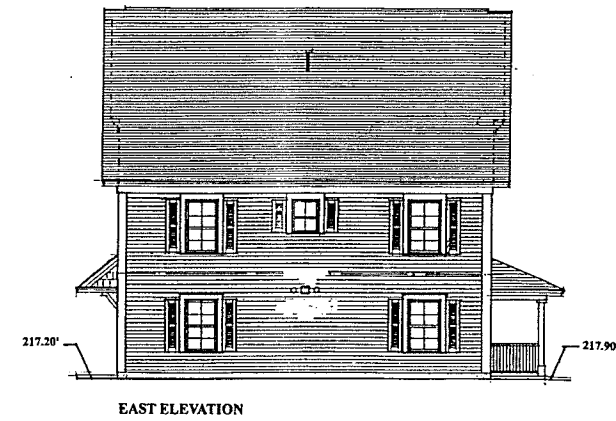
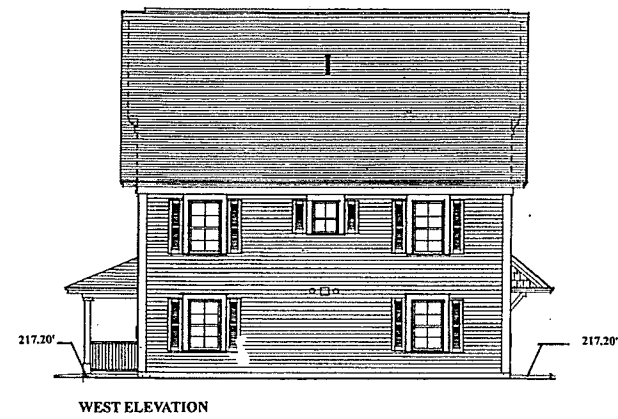
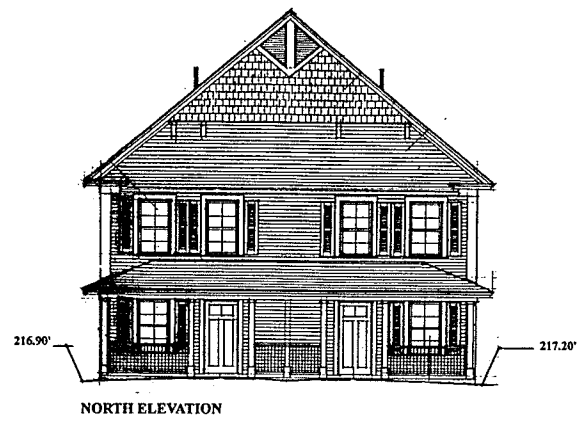
FINISHED GRADE ELEVATIONS
FOR
BUILDINGS F, G & H

MICHAEL DUGAN
ARCHITECT
1071
VERMONT
STATE OF VERMONT

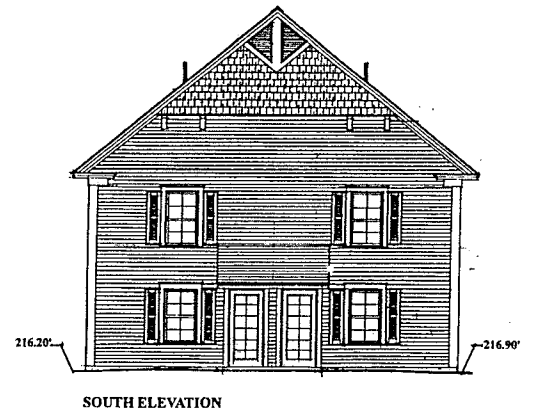
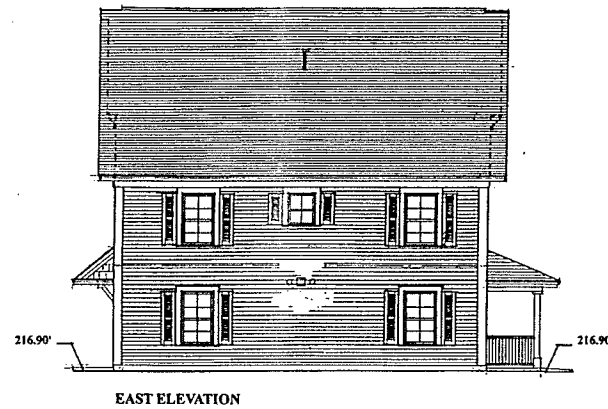
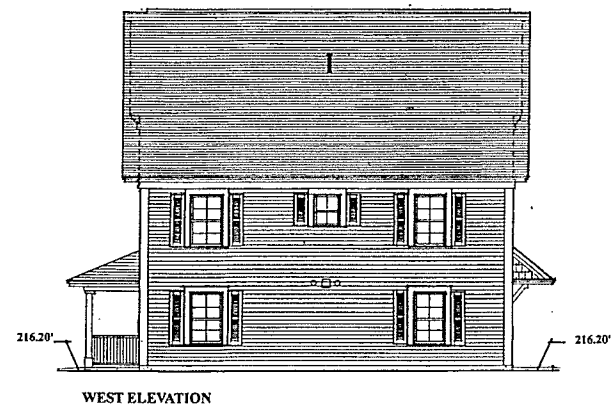
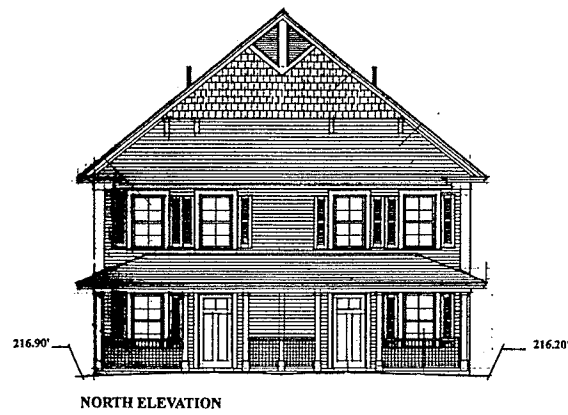
GARDEN STREET APARTMENTS
DUPLEX BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-13



BUILDING O
FFE=218.00'



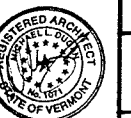
BUILDING P
FFE=216.70'

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FINISHED GRADE ELEVATIONS
FOR
BUILDINGS O & P

MICHAEL DUGAN
ARCHITECT
REGISTERED ARCHITECT
STATE OF VERMONT
No. 781

GARDEN STREET APARTMENTS
DUPLEX BUILDING
GARDEN STREET
BURLINGTON VERMONT



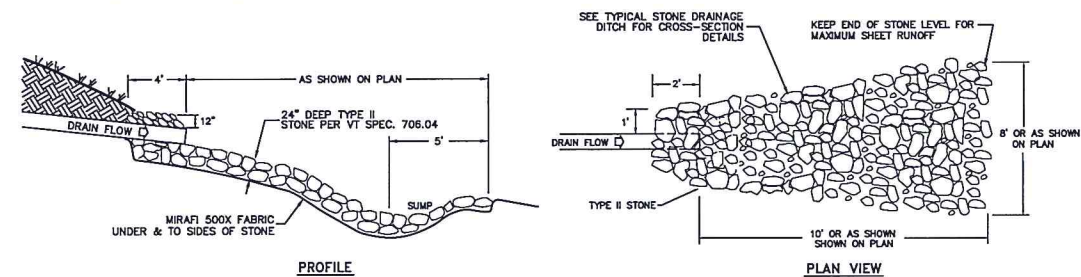
NOTE:
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FEBRUARY 16, 2015

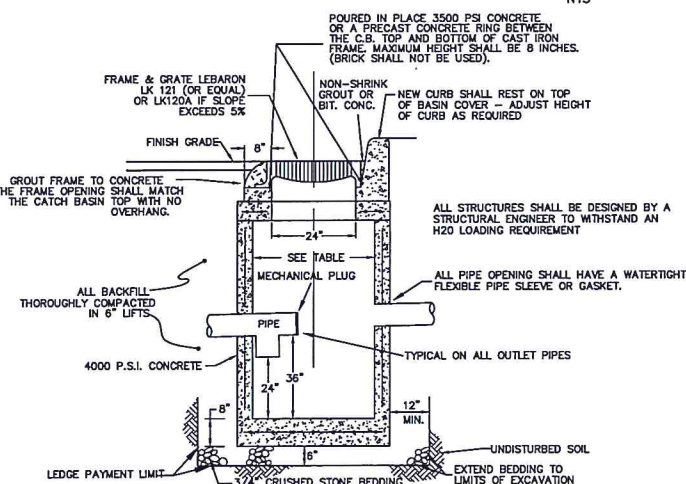
A-13

EROSION CONTROL SPECIFICATIONS

- ADDITIONAL EROSION CONTROL SHALL BE INSTALLED AS DEEMED NECESSARY BY THE CITY INSPECTOR.
- SEE OTHER DRAWINGS OF THESE PLANS FOR ADDITIONAL STORMWATER AND EROSION CONTROL SPECIFICATIONS AND DETAILS.
- THE ROADWAY AND YARD FINISH GRADE SLOPES SHALL NOT BE STEEPER THAN 3 ON 1. THE FINISHED GRADE SLOPES SHALL BE IMMEDIATELY GRADED AND MULCHED.
- SHOULD ANY DISTURBED AREA REMAIN UNWORKED FOR MORE THAN 30 DAYS THEN THE AREA SHALL BE MULCHED OR TEMPORARILY SEEDED WITH ANNUAL RYE. TOPSOIL SHALL BE PLACED, BE SEEDED AND MULCHED WITHIN FIVE DAYS AFTER ACHIEVING FINAL GRADE. WINTER EARTHWORK SHALL BE ALLOWED BY DOUBLING THE RATE OF MULCH.
- THE EROSION CONTROL METHODS USED DURING CONSTRUCTION OF THE DEVELOPMENT SHALL PROCEED IN THE FOLLOWING SEQUENCE:
 - THE CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCES, INLET PROTECTION AND OTHER EROSION CONTROL MEASURES, IF REQUIRED, AS ORDERED BY THE ENGINEER. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AFTER EVERY RAINFALL UNTIL THE NEW IMPROVEMENTS ARE PAVED AND ALL DISTURBED AREAS HAVE BEEN GRASSED. THE REPAIR OF THE EROSION CONTROL MEASURES WILL INCLUDE REMOVING ANY SEDIMENTATION. THE SEDIMENT MAY BE PLACED AS FILL IN THE LOW AREAS, IF APPROVED BY THE ENGINEER.
 - THE TOPSOIL SHALL BE REMOVED FROM THE AREAS TO BE GRADED AND STOCKPILED. A SILT FENCE SHALL BE PLACED CONTINUOUSLY AROUND THE BOTTOM OF THE PILE.
 - IN AREAS NEAR THE NEW CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE TRUNKS OF TREES TO BE SAVED WITH WOODEN SNOW FENCING ALONG THE DRIPLINE TO PROTECT THE FROM INJURY.
 - THE SITE GRADING WILL THEN BE DONE, AND THE PIPELINES WILL BE INSTALLED IMMEDIATELY FOLLOWING GRADING. THE CONTRACTOR WILL INSTALL AND MAINTAIN INLET PROTECTION AROUND THE CATCH BASINS UNTIL THE ROADWAY HAS BEEN PAVED AND GRASS HAS BEEN ESTABLISHED ON THE SLOPES.
 - THE CONTRACTOR WILL TOPSOIL, SEED, AND MULCH THE DISTURBED AREAS WITHIN 5 DAYS OF ACHIEVING FINAL GRADE.
 - OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND SILT FENCE SHALL BE EMPLOYED TO CONFINED SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER.



STORM OUTFALL DETAIL

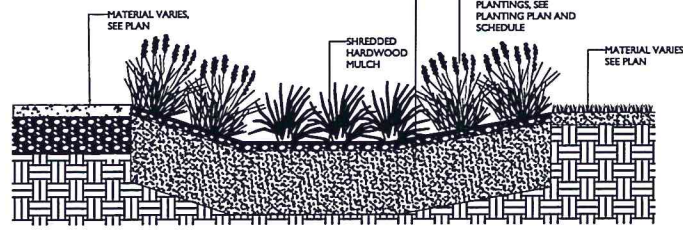


PRECAST CATCH BASIN

CATCH BASINS SHALL BE SIZED SUCH THAT:

- AT ANY ELEVATION, A MINIMUM OF 60% OF THE CIRCUMFERENCE SHALL BE CONCRETE.
- THE MINIMUM DISTANCE, AS MEASURED ALONG THE CIRCUMFERENCE, BETWEEN TWO OPENINGS SHALL BE 6'.
- THE BASINS SHALL ALSO MEET THE FOLLOWING MINIMUM REQUIREMENTS:

CATCH BASIN DIAMETER	LARGEST PIPE DIA. ALLOWED	SIDEWALL THICKNESS	CONCRETE COVER THICKNESS
36"	18"	4"	6"
48"	30"	5"	10"
60"	36"	6"	12"
72"	48"	7"	18"



RAIN GARDEN

STORM SYSTEM MAINTENANCE

SYSTEM MAINTENANCE IS IMPORTANT FOR TREATMENT AND CONTROL OF STORM RUNOFF FROM THE IMPERVIOUS SURFACES (ROAD, PARKING, AND WALKWAY). THE FOLLOWING ELEMENTS FORM THE MINIMUM REQUIREMENTS:

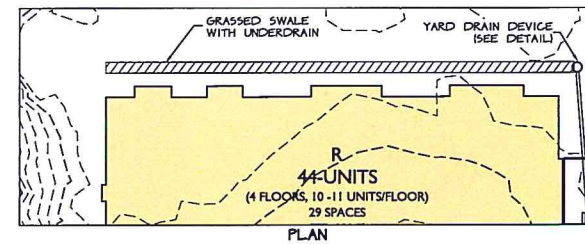
- THE OWNER (OR REPRESENTATIVE) SHALL PERFORM INSPECTIONS BI-ANNUALLY AND FOLLOWING SIGNIFICANT (LARGE) STORM EVENTS. THE FOLLOWING ITEMS SHALL BE REVIEWED: CONDITION OF THE VEGETATION, CONDITION OF THE DITCH SURFACES, DEPTH OF ACCUMULATED SEDIMENT (IF ANY), THE PRESENCE OF EROSION (IF ANY), CONDITION OF THE STORM PIPES, AND THE CONDITION OF THE PIPE INLETS AND OUTLETS. ANY OBSERVABLE DEGRADATION OF THE STORM SYSTEM SHALL BE NOTED.
- THE OWNER (OR REPRESENTATIVE) SHALL COMPLETE REPAIR OF ANY ITEMS, AS REQUIRED TO MAINTAIN OPTIMAL SYSTEM OPERATION. AT A MINIMUM, THE FOLLOWING ITEMS SHALL BE INCLUDED:
 - ANY EROSION GULLIES 6 INCHES OR DEEPER SHALL BE FILLED AND VEGETATION ESTABLISHED IN THE DISTURBED AREA.
 - SEDIMENT ACCUMULATED TO A DEPTH OF MORE THAN 6 INCHES IN THE ROAD DITCHES SHALL BE REMOVED AND DISPOSED OF IN AN UPLAND AREA THAT IS NOT WITHIN 100 FEET OF WATERS OF THE STATE. VEGETATION SHALL BE ESTABLISHED IN ALL DISTURBED AREAS.
 - VEGETATION SHALL BE ESTABLISHED AS NEEDED, IN AREAS OF BARE SOIL. THIS IS PARTICULARLY IMPORTANT IN FLOW AREAS WHERE VEGETATION PROVIDES SEDIMENT REMOVAL.
 - SILT FENCES SHALL BE USED IF NEEDED TO PREVENT EROSION AND AID IN THE ESTABLISHMENT OF VEGETATION. THESE TEMPORARY MEASURES SHALL BE REMOVED AFTER THE SITE IS STABILIZED AND THE RISK OF EROSION IS REDUCED.
 - THE GRASSED AREAS SHALL BE MOVED AS NEEDED TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION.



EXAMPLE OF AN OUTFLOW STRUCTURE

IMPORTANT STORM NOTES DURING CONSTRUCTION

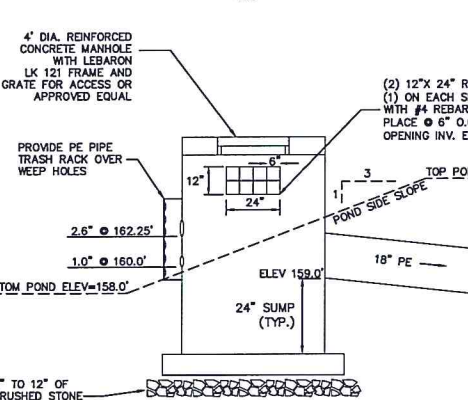
- Low flow orifice at bottom - Very important that there be at least 6" of space between the bottom of stone and invert of the orifice to prevent clogging.
- Top of standpipe shall be 6" below the top of system which shall be level elevation shown on plan. Pipe should be cut to length after installation of swale to ensure this requirement is met.
- The primary function of the outside pipe is to function as a trash rack (i.e. to prevent debris from clogging the low flow orifice). That is why the 6" of freeboard is so important - see note A above. The trash rack orifices shall be cut no larger than the low flow orifice specified on the plan - see detail. The orifices can be cut with a hole saw or spade bit. Any plastic bars should be removed with a file or whatever mechanism necessary to ensure holes are smooth to lessen the chances of clogging.



PLAN

GRASSED SWALE WITH UNDERDRAIN

NTS

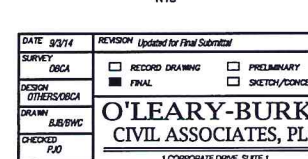


OUTLET STRUCTURE

NTS

TRASH RACK DETAIL

NTS



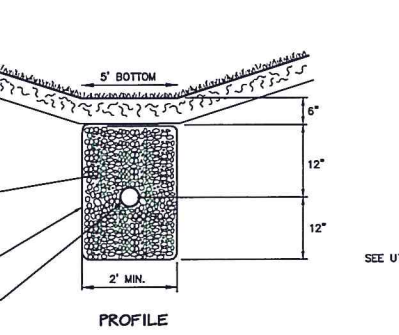
TRASH RACK DETAIL

NTS

PROFILE

RAIN GARDEN OUTFLOW DEVICE

NTS

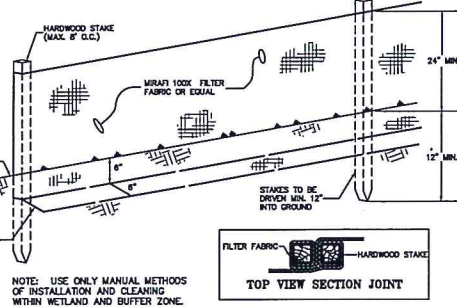


RAIN GARDEN OUTFLOW DEVICE

NTS

YARD DRAIN PROFILE

NTS

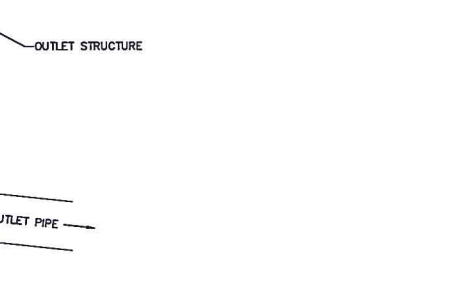


YARD DRAIN PROFILE

NTS

TEMPORARY SILT FENCE

NTS



TEMPORARY SILT FENCE

NTS

STABILIZED CONSTRUCTION ENTRANCE

NTS



STABILIZED CONSTRUCTION ENTRANCE

NTS



DATE: 9/14
SURVEY: OBCA
DESIGN: OBCA
DRAWN: BAB/MC
CHECKED: PJD
SCALE: 1"=40'

REVISION: Updated for Final Submittal
OBCA: []
FINAL: []
PRELIMINARY: []
SKETCH/CONCEPT: []

O'LEARY-BURKE
CIVIL ASSOCIATES, PLLC
1 CORPORATE DRIVE, SUITE 1
PO BOX 879 9990
FAL 978-9999
E-MAIL: poburke@olearyburke.com

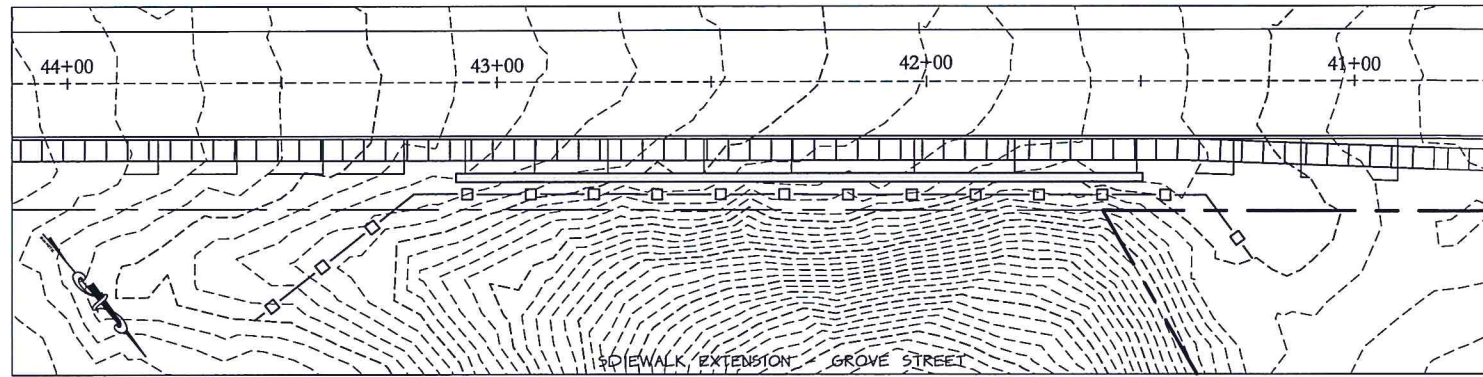
IRELAND PROPERTY
Grove Street
Burkeville, VT

STORMWATER & EROSION CONTROL DETAILS

DATE: 7-23-14
BY: DMC
DATE: 2011-52
DATE: 2011-52-53
PLAN SHEET #

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-800-225-4977 PRIOR TO ANY EXCAVATION.

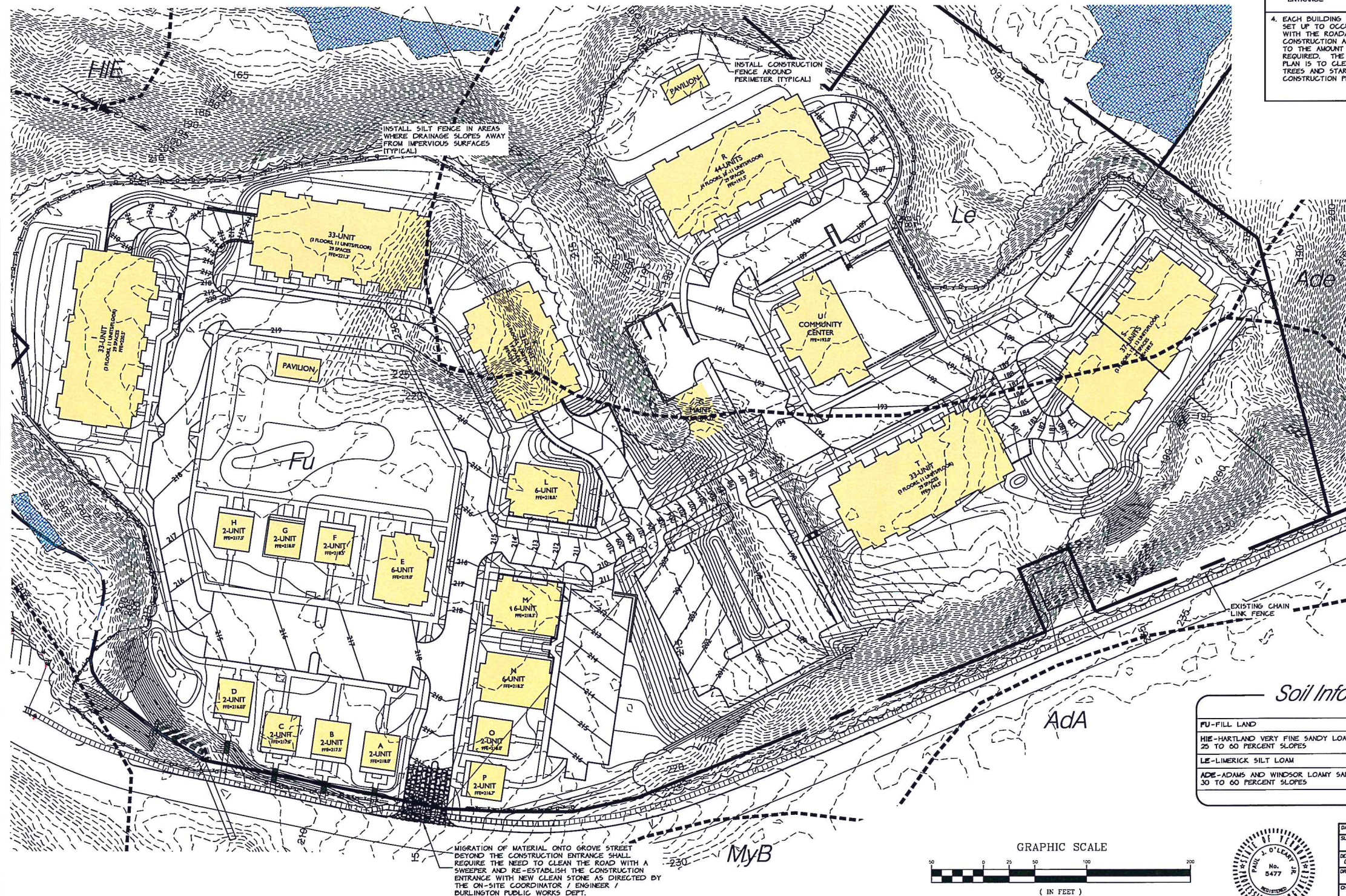
Legend	
	PROJECT BOUNDARY
	CONTOUR LINE (U.S.G.S. DATUM)
	PROPOSED FINISH GRADE CONTOUR
	EDGE OF WOODED AREA
	PROPOSED SEWERLINE
	SOILS
	PROPOSED WATERLINE
	PROPOSED HYDRANT
	FRENCH DRAIN
	RETAINING WALL
	PROPOSED PAVEMENT
	PROPOSED BUILDING
	EXISTING CHAIN LINK FENCE
	CONSTRUCTION FENCE
	SILT FENCE



PRE-CONSTRUCTION SEQUENCING FOR EROSION PREVENTION + SEDIMENT CONTROL

PRE-CONSTRUCTION PHASE INSTALLATION OF THE EROSION CONTROL DEVICES BEFORE CONSTRUCTION COMMENCES

MAJOR CONSTRUCTION ITEM	EROSION CONTROL	MAINTENANCE
1. CONDUCT A PRE-CONSTRUCTION VISUAL SURVEY OF OVERFLOW DISCHARGE POINT AS SHOWN TO BE WITNESSED BY CONTRACTOR AND ENGINEER. IT IS THE RESPONSIBILITY OF THE CHOSEN CONTRACTOR TO NOTIFY THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.	INSPECT OVERFLOW DISCHARGE POINT DURING ANY STORM EVENT THAT DISCHARGES STORMWATER FROM THE SITE AND COMPARE TO THE PRE-CONSTRUCTION CONDITION. ANY DISCOLORATION OR APPARENT SEDIMENT LEAVING THE SITE SHALL BE REPORTED TO THE ON-SITE ENGINEER IMMEDIATELY AND MEASURES SHALL BE TAKEN TO REMEDY THE SITUATION BEFORE ANY CONSTRUCTION CAN CONTINUE.	ALL INSPECTIONS OF THE DISCHARGE POINT INCLUDING PHOTOS OF THE PRE-CONSTRUCTION CONDITIONS SHALL BE KEPT ON SITE AT ALL TIMES FOR COMPARISON PURPOSES BY THE STATE OF VERMONT AND ON-SITE ENGINEER UNTIL SITE IS FULLY STABILIZED.
2. MARK LIMITS OF AREA TO BE DISTURBED.	INSTALL CONSTRUCTION FENCING AT LOCATIONS SHOWN ON PLAN.	MAINTAIN UNTIL CONSTRUCTION WITHIN ANY GIVEN PHASE IS COMPLETED OR STABILIZED.
3. INSTALL SILT FENCING AND STABILIZED CONSTRUCTION ENTRANCE	INSTALL SILT FENCING AND STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS SHOWN ON PLAN.	MAINTAIN SILT FENCE AND REMOVE DEPOSITS OF SILT. REMOVE AND REPLACE STONE AT ENTRANCE AS ORDERED BY THE ON-SITE COORDINATOR.
4. EACH BUILDING CONSTRUCTION IS SET UP TO OCCUR IN CONJUNCTION WITH THE ROAD/PARKING LOT CONSTRUCTION AS ONE PHASE DUE TO THE AMOUNT OF EARTHWORK REQUIRED. THE INTENT OF THIS PLAN IS TO CLEAR ANY NECESSARY TREES AND START RE-GRADING, SEE CONSTRUCTION PHASE.	INSTALL LIMITS OF CONSTRUCTION AROUND THE SITE AND SILT FENCE ON THE DOWNHILL SIDE. ANY EXCAVATION STOCKPILES MADE AS THE RESULT OF FOUNDATION EXCAVATION ARE TO BE SURROUNDED WITH SILT FENCE AND TOPSOIL FILES ARE TO BE SEEDED AND MULCHED IF THEY ARE TO REMAIN FOR MORE THAN 14 DAYS.	THE SILT FENCE IS TO BE MAINTAINED UNTIL THE STOCKPILE HAS BEEN REMOVED. IN-USE AREAS OF THE STOCKPILE AREA TO BE RESEEDED AND REMULCHED IF OPEN AND UNUSED FOR MORE THAN 14 DAYS.



GENERAL NOTES :

- THE PURPOSE OF THESE PLANS IS TO :
 - MINIMIZE THE AREA OF DISTURBED SOILS AND TO MINIMIZE THE DURATION THAT ANY AREAS ARE LEFT OPEN.
 - ISOLATE THE AREAS OF DISTURBANCE TO PREVENT AND CONTROL EROSION CAUSED BY RUN-OFF.
 - CONTROL THE AMOUNTS OF SEDIMENT THAT MAY RESULT FROM ANY SITE EROSION.
- A COPY OF THE CONSTRUCTION GENERAL PERMIT AND A SET OF THE PLANS WILL BE AVAILABLE ON-SITE.
- THE ON-SITE PLAN COORDINATOR IS AS SHOWN ON THIS PLAN.
- THE ON-SITE COORDINATOR SHALL INSPECT AND KEEP A WRITTEN RECORD OF THE EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES AT A MINIMUM OF ONCE A WEEK AND ALSO WITHIN 24 HOURS OF ANY STORM EVENT THAT DISCHARGES RUN-OFF FROM THE SITE.
- THE ON-SITE COORDINATOR SHALL KEEP A WRITTEN RECORD OF EROSION CONTROL INSPECTIONS AND ANY MONITORING DATA FOR A MINIMUM OF THREE (3) YEARS FOLLOWING COMPLETION OF CONSTRUCTION.
- REFER TO PLAN SHEETS EC1 THROUGH EC3 FOR ALL EROSION CONTROL PLANS AND SPECIFICATIONS.

PLAN INDEX

SHT.	PLAN DESCRIPTION
E1	EPSC PRE-CONSTRUCTION PLAN
E2	EPSC CONSTRUCTION PLAN PHASE I
E3	EPSC CONSTRUCTION PLAN PHASE II
E4	EPSC POST-CONSTRUCTION PLAN
E5	EPSC CULVERT REMOVAL PLAN
E6	EPSC DETAILS + SPECIFICATIONS

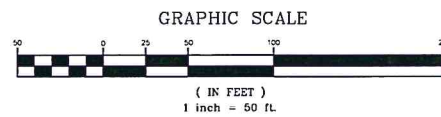
INSPECTION SCHEDULE	WEEKLY	AFTER EACH RAINFALL THAT GENERATES STORMWATER FROM SITE
INSPECT SILT FENCING	X	X
INSPECT CONSTRUCTION FENCE	X	X
INSPECT AREAS TEMPORARILY MULCHED	X	X
INSPECT TEMPORARY SOIL STOCKPILE	X	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED + MULCHED	X	X
INSPECT STORMWATER POND AND SEDIMENT TRAPS	X	X

Soil Information

FU-FILL LAND	12.65 ACRES
HIE-HARTLAND VERY FINE SANDY LOAM, 25 TO 60 PERCENT SLOPES	2.20 ACRES
LE-LIMERICK SILT LOAM	5.90 ACRES
ADA-ADAMS AND WINDSOR LOAMY SAND, 30 TO 60 PERCENT SLOPES	.04 ACRES
	20.79 ACRES TOTAL

ON-SITE COORDINATOR:
PAT O'BRIEN
PHONE - (802)863-6222

NOTE: IF WINTER CONSTRUCTION WILL OCCUR BETWEEN OCTOBER 15 AND APRIL 15 REFER TO THE WINTER EROSION CONTROL GUIDELINES FOR ADDITIONAL EROSION AND SEDIMENT CONTROL REQUIREMENTS APPLYING TO ANY COMPONENT OF PROJECT AS OUTLINED ABOVE.



DATE: 9/2/14	REVISION: Updated for Final Submittal	BY: BWC
SURVEY: ORCA	☐ RECORD DRAWING ☒ PRELIMINARY	DATE: 1-15-14
DESIGN: OTHERS/VERBA	☐ FINAL ☒ SKETCH/CONCEPT	DATE: 2011-52
DRAWN: BWC	No. 5477	FILE: 2011-52-BUFFER
CHECKED: JUD		PLAN SHEET #
SCALE: 1"=50'	1 CORPORATE DRIVE, SUITE 1 ESSEX, VT, VT PHONE: 878-9990 FAX: 878-9990	EC1

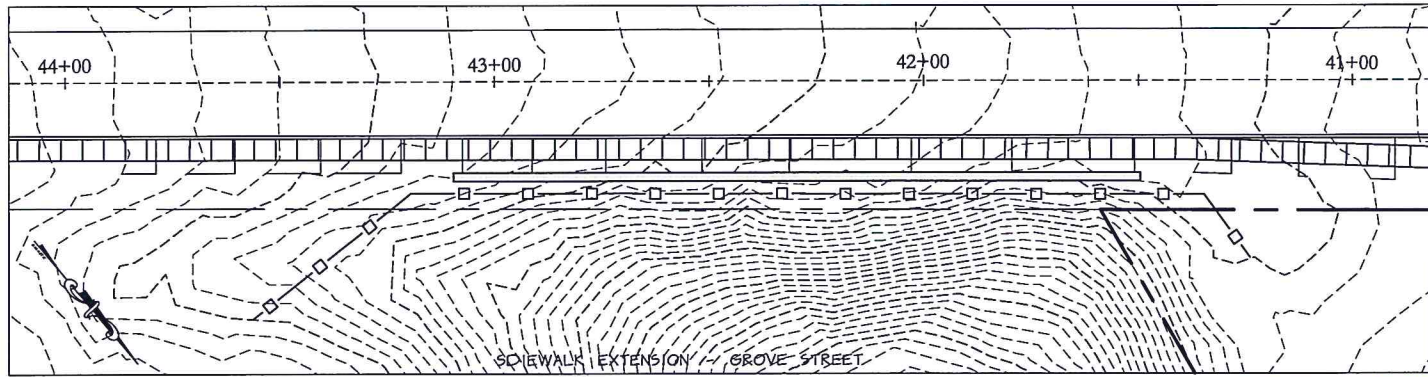
IRELAND PROPERTY

Grove Street Burlington, VT

EROSION CONTROL PLAN
PRE-CONSTRUCTION

Legend

	PROJECT BOUNDARY
	CONTOUR LINE (U.S.G.S. DATUM)
	PROPOSED FINISH GRADE CONTOUR
	EDGE OF WOODED AREA
	PROPOSED SEWERLINE
	PROPOSED STORMLINE
	PROPOSED WATERLINE
	PROPOSED HYDRANT
	FRENCH DRAIN
	RETAINING WALL
	PROPOSED PAVEMENT
	PROPOSED BUILDING
	EXISTING CHAIN LINK FENCE
	CONSTRUCTION FENCE
	SILT FENCE



CONSTRUCTION SEQUENCING FOR EROSION PREVENTION + SEDIMENT CONTROL

THE ON-SITE COORDINATOR SHALL INSPECT THE SITE AND THE SEDIMENT CONTROL MEASURES A MINIMUM OF ONCE EVERY SEVEN DAYS, PRIOR TO PREDICTED STORM EVENTS AND WITHIN 24 HOURS FOLLOWING ANY PRECIPITATION WITH A VOLUME LARGE ENOUGH TO DISCHARGE RUN-OFF FROM THE SITE. THE WEEKLY REPORT AND EROSION CONTROL PLAN WILL BE KEPT ON-SITE.

PHASE 1 CONSTRUCTION OF ROADWAYS AND PARKING AREA, INSTALLATION OF UTILITIES, AND SITE GRADING

MAJOR CONSTRUCTION ITEM	EROSION CONTROL	MAINTENANCE
1. MARK LIMITS OF AREA TO BE DISTURBED.	INSTALL CONSTRUCTION FENCING AT LOCATIONS SHOWN ON PLAN.	MAINTAIN UNTIL CONSTRUCTION WITHIN PHASE 1 IS COMPLETED.
2. INSTALL SILT FENCING AND STABILIZED CONSTRUCTION ENTRANCE	INSTALL SILT FENCING AND STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS SHOWN ON PLAN.	MAINTAIN SILT FENCE AND REMOVE DEPOSITS OF SILT. REMOVE AND REPLACE STONE AT ENTRANCE AS ORDERED BY THE ON-SITE COORDINATOR.
3. GRUBBING AND TOPSOIL STOCKPILING	ANY STUMPS ARE TO BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. A SILT FENCE IS TO BE INSTALLED AROUND THE BASE OF THE STOCKPILE. THE STOCKPILE IS TO BE SEED AND MULCHED WITHIN 48 HOURS OF PLACEMENT.	THE SILT FENCE IS TO BE MAINTAINED UNTIL THE STOCKPILE HAS BEEN REMOVED. IN-USE AREAS OF THE STOCKPILE ARE TO BE RESEED AND REMULCHED IF OPEN AND UNUSED FOR MORE THAN A WEEK.
4. CONSTRUCTION OF STORM SYSTEM, ROAD/PARKING BASE, INSTALLATION OF UTILITIES AND FINISH SITE GRADING	DISTURBED AREAS ARE TO BE SEED AND MULCHED WITHIN 7 DAYS OF DISTURBANCE. AREAS THAT ARE FINISH GRADED ARE TO BE SEED AND MULCHED WITHIN 48 HOURS.	ROADWAY SIDESLOPES ARE TO BE INSPECTED WEEKLY OR IMMEDIATELY FOLLOWING A RUN-OFF PRODUCING STORM. REMOVE SEDIMENT AND REPLACE STONE AS NECESSARY.
5. SEEDING AND MULCHING OF COMPLETED AREAS		
6. PAVING OF ROADWAY AREA	FINISH GRADING, SEED + MULCHING OF ANY UNFINISHED AREAS	
7. BUILDING FOUNDATION EXCAVATION AND RE-GRADING IN CONSERVATION ZONES AND WETLAND BUFFERS	STOCKPILES SHALL BE LIMITED TO AREAS NOT INSIDE THE CONSERVATION ZONES OR WETLAND BUFFERS	DISTURBED AREAS ARE TO BE MAINTAINED UNTIL GRASS IS ESTABLISHED.

INSPECTION SCHEDULE	WEEKLY	AFTER EACH RAINFALL THAT GENERATES STORMWATER FROM SITE
INSPECT SILT FENCING	X	X
INSPECT CONSTRUCTION FENCE	X	X
INSPECT AREAS TEMPORARILY MULCHED	X	X
INSPECT TEMPORARY SOIL STOCKPILE	X	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED + MULCHED	X	X
INSPECT STORMWATER PONDS AND SEDIMENT TRAPS	X	X

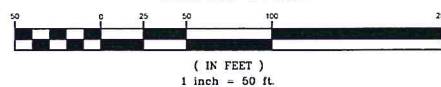
ON-SITE COORDINATOR:
PAT O'BRIEN
PHONE - (802)863-6222

NOTE: IF WINTER CONSTRUCTION WILL OCCUR BETWEEN OCTOBER 15 AND APRIL 15 REFER TO THE WINTER EROSION CONTROL GUIDELINES FOR ADDITIONAL EROSION AND SEDIMENT CONTROL REQUIREMENTS APPLYING TO ANY COMPONENT OF PROJECT AS OUTLINED ABOVE.

WINTER GUIDELINES FOR EROSION PREVENTION + SEDIMENT CONTROL

- ALL DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- ALL SILT FENCE OR OTHER PRACTICES REQUIRING EARTH DISTURBANCE SHALL BE IN PLACE PRIOR TO GROUND FREEZING.
- WHEN MULCH IS REQUIRED FOR STABILIZATION DOUBLE THE STANDARD RATE SHALL BE APPLIED.
- TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
 - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
 - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
 - PERFORMING DRILLING AND BLASTING WHERE SITE IS IN A DEPRESSION AND STORMWATER IS TRAPPED.
- PRIOR TO STABILIZATION SNOW AND ICE MUST BE REMOVED TO DEPTH OF NO LESS THAN 1 IN.
- ALL DISTURBED AREAS MUST BE SEED AND MULCHED WITHIN 48 HOURS OF BEING BROUGHT TO FINISH GRADE.
- DURING WINTER EROSION, MULCH SHALL BE APPLIED AT DOUBLE THE RATE OR NETTING OR OTHER APPROACH SHALL BE USED TO PREVENT REMOVAL BY WIND.

GRAPHIC SCALE



DATE: 9/2/14
SURVEY: OBCA
DESIGN: OBCA
DRAWN: BWC
CHECKED: PJL
SCALE: 1"=50'

REVISION: Updated for Final Submit
☐ RECORD DRAWING
☐ FINAL
☒ PRELIMINARY
☐ SKETCH/CONCEPT

O'LEARY-BURKE
CIVIL ASSOCIATES, PLC
1 CORPORATE DRIVE, SUITE 1
ESSEX, VT 05732
PHONE: 878-9888
FAX: 878-9888

IRELAND PROPERTY

Grove Street Burlington, VT

EROSION CONTROL PLAN
CONSTRUCTION PHASE I

BY: BWC

DATE: 7-15-14

DATE: 2011-02

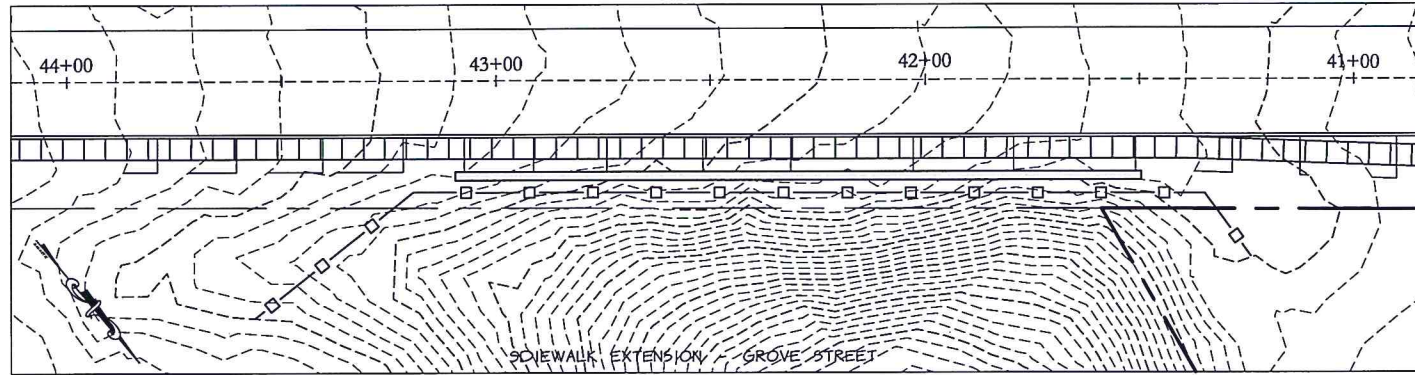
FILE: 2011-02-BUFFER

PLAN SHEET #

EC2

Legend

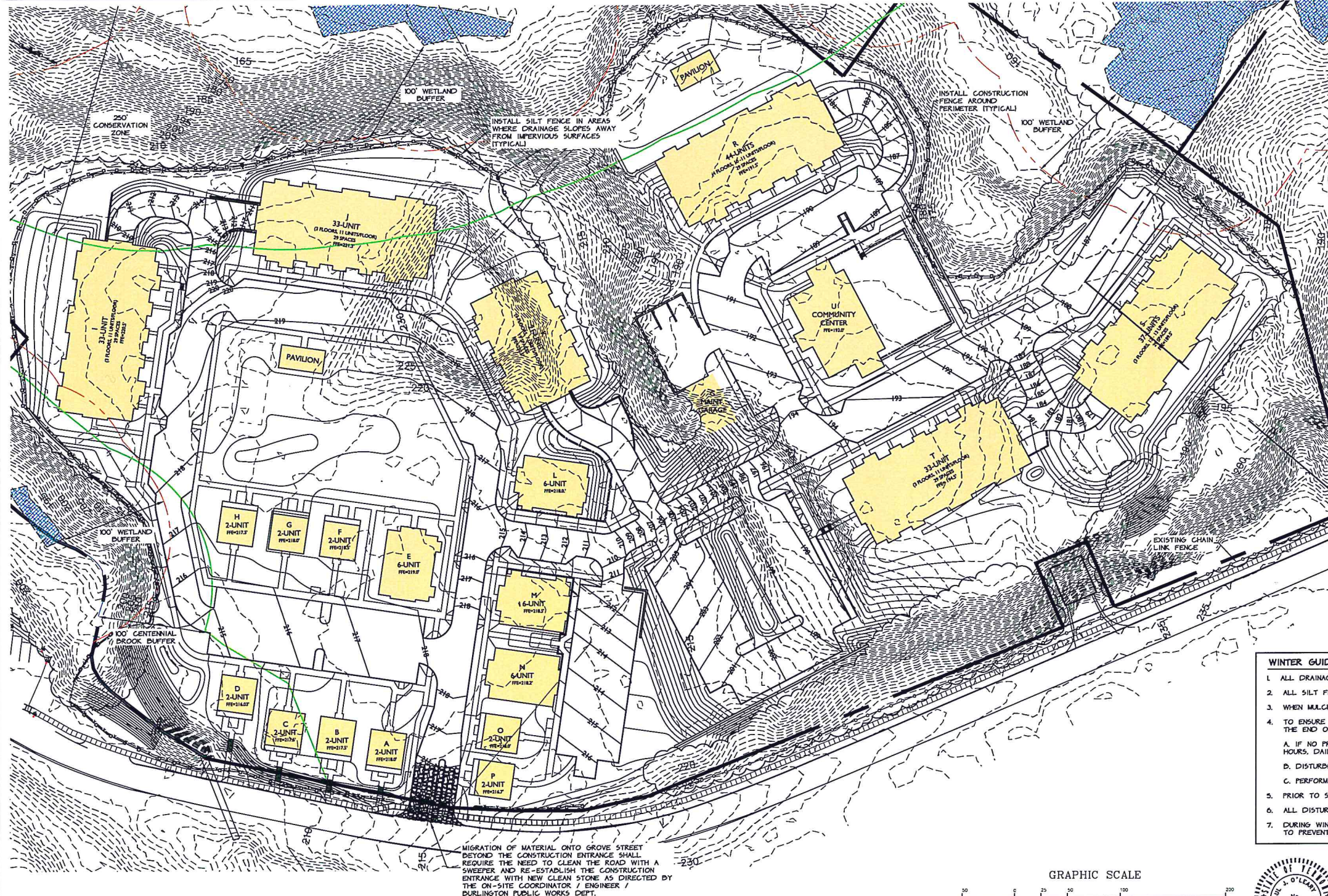
---	PROJECT BOUNDARY
---	500' CONTOUR LINE (U.S.G.S. DATUM 1)
---	PROPOSED FINISH GRADE CONTOUR
---	EDGE OF WOODED AREA
---	PROPOSED SEWERLINE
---	PROPOSED STORMLINE
---	PROPOSED WATERLINE
---	PROPOSED HYDRANT
---	FRENCH DRAIN
---	RETAINING WALL
---	PROPOSED PAVEMENT
---	PROPOSED BUILDING
---	EXISTING CHAIN LINK FENCE
---	CONSTRUCTION FENCE
---	SILT FENCE



CONSTRUCTION SEQUENCING FOR EROSION PREVENTION + SEDIMENT CONTROL

PHASE II CONSTRUCTION BUILDING, UTILITY CONNECTIONS AND FINISH SITE GRADING

MAJOR CONSTRUCTION ITEM	EROSION CONTROL	MAINTENANCE
1. MARK LIMITS OF AREA TO BE DISTURBED.	INSTALL CONSTRUCTION FENCING AROUND AREAS TO BE EXCAVATED.	MAINTAIN UNTIL CONSTRUCTION IS COMPLETED. (FENCE LOCATIONS WILL BE ADJUSTED AS BUILDINGS ARE FINISHED).
2. INSTALL SILT FENCING	INSTALL SILT FENCING AROUND AREAS TO BE EXCAVATED.	MAINTAIN SILT FENCE AND REMOVE DEPOSITS OF SILT.
3. EXCAVATION FOR BUILDING, INSTALLATION OF UTILITIES AND FINISH GRADING.	DISTURBED AREAS ARE TO BE SEEDED AND MULCHED WITHIN 7 DAYS. AREAS THAT ARE FINISH GRADED ARE TO BE SEEDED AND MULCHED WITHIN 48 HOURS.	DISTURBED AREAS ARE TO BE MAINTAINED UNTIL GRASS IS ESTABLISHED. (FENCE LOCATIONS TO BE MINIMIZED AS AREAS ARE COMPLETED AND GRASS IS ESTABLISHED).
4. BUILDING FOUNDATION EXCAVATION AND RE-GRADING IN CONSERVATION ZONES AND WETLAND BUFFERS	STOCKPILES SHALL BE LIMITED TO AREAS NOT INSIDE THE CONSERVATION ZONES OR WETLAND BUFFERS	DISTURBED AREAS ARE TO BE MAINTAINED UNTIL GRASS IS ESTABLISHED.



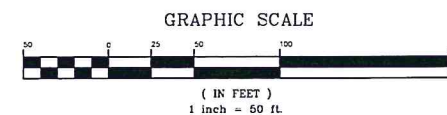
INSPECTION SCHEDULE	WEEKLY	AFTER EACH RAINFALL THAT GENERATES STORMWATER FROM SITE
INSPECT SILT FENCING	X	X
INSPECT CONSTRUCTION FENCE	X	X
INSPECT AREAS TEMPORARILY MULCHED	X	X
INSPECT TEMPORARY SOIL STOCKPILE	X	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED + MULCHED	X	X
INSPECT STORMWATER PONDS AND SEDIMENT TRAPS	X	X

ON-SITE COORDINATOR:
PAT O'BRIEN
PHONE - (802)863-6222

NOTE: IF WINTER CONSTRUCTION WILL OCCUR BETWEEN OCTOBER 15 AND APRIL 15 REFER TO THE WINTER EROSION CONTROL GUIDELINES FOR ADDITIONAL EROSION AND SEDIMENT CONTROL REQUIREMENTS APPLYING TO ANY COMPONENT OF PROJECT AS OUTLINED ABOVE.

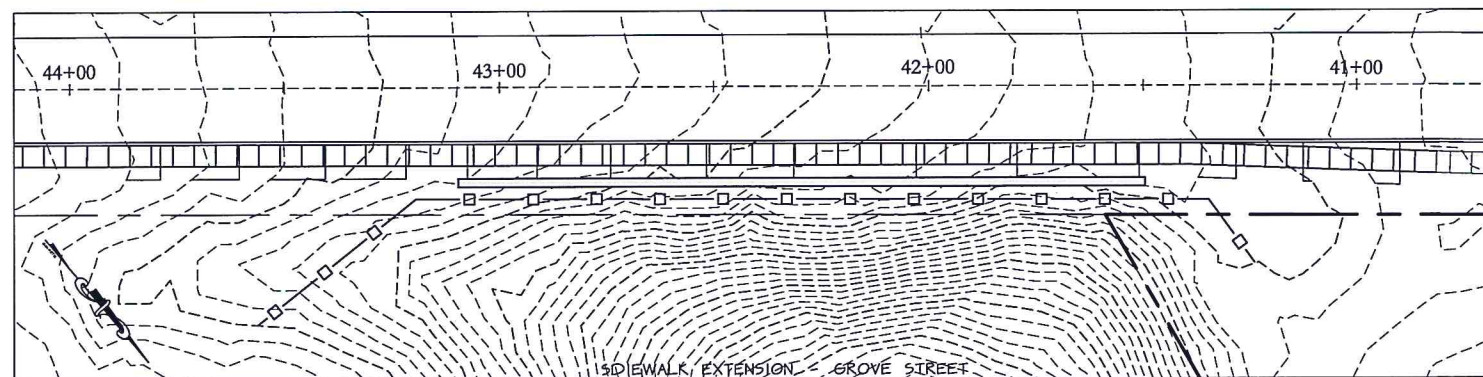
WINTER GUIDELINES FOR EROSION PREVENTION + SEDIMENT CONTROL

- ALL DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- ALL SILT FENCE OR OTHER PRACTICES REQUIRING EARTH DISTURBANCE SHALL BE IN PLACE PRIOR TO GROUND FREEZING.
- WHEN MULCH IS REQUIRED FOR STABILIZATION DOUBLE THE STANDARD RATE SHALL BE APPLIED.
- TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
 - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
 - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
 - PERFORMING DRILLING AND BLASTING WHERE SITE IS IN A DEPRESSION AND STORMWATER IS TRAPPED.
- PRIOR TO STABILIZATION SNOW AND ICE MUST BE REMOVED TO DEPTH OF NO LESS THAN 1 IN.
- ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED WITHIN 48 HOURS OF BEING BROUGHT TO FINISH GRADE.
- DURING WINTER EROSION, MULCH SHALL BE APPLIED AT DOUBLE THE RATE OR NETTING OR OTHER APPROACH SHALL BE USED TO PREVENT REMOVAL BY WIND.



DATE: 02/14	REVISION: Updated for Final Submittal
SURVEY: 08/04	DESIGN: 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	PROJECT BOUNDARY
	CONTOUR LINE (U.S.G.S. DATUM)
	PROPOSED FINISH GRADE CONTOUR
	EDGE OF WOODED AREA
	PROPOSED SEWERLINE
	PROPOSED STORMLINE
	PROPOSED WATERLINE
	PROPOSED HYDRANT
	FRENCH DRAIN
	RETAINING WALL
	PROPOSED PAVEMENT
	PROPOSED BUILDING
	EXISTING CHAIN LINK FENCE
	CONSTRUCTION FENCE
	SILT FENCE



POST-CONSTRUCTION PHASE FINAL INSPECTION OF THE EROSION CONTROL DEVICES TO BE REMOVED AFTER AREAS ARE STABILIZED

MAJOR CONSTRUCTION ITEM	EROSION CONTROL	MAINTENANCE
1. CHECK PERIMETER WHERE DELINEATION CONSTRUCTION LIMITS WERE PLACED.	IF PERIMETER IS STABILIZED AND GRASS IS ESTABLISHED, REMOVE FENCES.	
2. DURING CONSTRUCTION, INFILTRATION BASINS AND SWALES WERE CONSTRUCTED FIRST AND SHOULD BE COMPLETELY STABILIZED BY NOW.	CHECK STORM SYSTEMS AND GRASSSED SWALES BY ROADS TO MAKE SURE EVERYTHING IS STABILIZED. CHECK OVERALL SITE FOR ANY PROBLEM AREAS ENCOUNTERED DURING CONSTRUCTION AND OVERALL SITE.	SEED AND MULCH ANY DISTURBED AREAS.
3. CONDUCT A POST CONSTRUCTION INSPECTION OF THE DISCHARGE LOCATION LEADING TO THE WATERS OF THE STATE OF VERMONT.	TAKE PHOTOS AND NOTE FINAL INSPECTION IN EROSION CONTROL CONSTRUCTION BOOK.	IF EVERYTHING IS STABLE, ALL DEMARCATION AND SILT FENCES SHALL BE REMOVED. THE CONSTRUCTION ENTRANCES SHALL BE TAKEN OUT IN PREPARATION FOR PAVING.

THE PURPOSE OF THE EROSION AND SEDIMENT STABILIZATION PLAN IS TO COMPLY WITH STATE + FEDERAL REGULATIONS DEALING WITH THE CONTROL OF NONPOINT SOURCE (NPS) POLLUTION. THE PLAN CONTAINS A SERIES OF BEST MANAGEMENT PRACTICES (BMPs) DESIGNED TO MINIMIZE POLLUTION RESULTING OF STORMWATER RUNOFF AND OFF-SITE SEDIMENT DEPOSITION DURING LAND DISTURBANCE ACTIVITIES.

TO MINIMIZE THE POTENTIAL FOR EROSION CONSTRUCTION HAS BEEN BROKEN DOWN INTO FOUR PHASES. THE PROPOSED PLAN SEEKS TO MINIMIZE THE AREA DISTURBED AT ANY ONE TIME AND LIMIT THE AMOUNT OF TIME THE DISTURBED PORTIONS REMAIN EXPOSED BY REQUIRING FREQUENT (WEEKLY) TEMPORARY SEEDING AND/OR MULCHING AND BY REQUIRING THAT SURFACES BROUGHT TO FINISH GRADE BE TOPSOILED AND SEEDDED WITHIN 48 HOURS.

AN URBAN TYPE GRASS MIXTURE SHALL BE USED FOR ALL PERMANENT SEEDING + MULCHING CONSISTING OF 38% KENTUCKY BLUEGRASS, 38% CREEPING RED FESCUE, AND 26% ANNUAL RYEGRASS. FOR WINTER CONSTRUCTION THE GRASS MIXTURE SHALL BE PLACED AT A RATE OF 240# PER ACRE.

FERTILIZER SHALL BE PLACED AT A RATE OF 1 TO 2 TONS PER ACRE. WHERE SPECIFIED, AN EROSION CONTROL BLANKET SHALL BE USED. THE CONTRACTOR SHALL FOLLOW THE MANUFACTURERS RECOMMENDATION FOR PROPER OVERLAP AND FASTER PLACEMENT. IN ADDITION, THE CONTRACTOR SHALL REPLACE ANY MULCH LOST TO WINDTHROW ON A WEEKLY BASIS.

ALL NON-IMPERVIOUS SURFACES SHALL BE TOPSOILED, SEEDING AND MULCHED WITHIN 48 HOURS OF ESTABLISHING FINISH GRADE. THE CONTRACTOR SHALL INSPECT ALL SILT FENCING, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCE AND STORM POND DETENTION AREAS ON A DAILY BASIS AND IMMEDIATELY FOLLOWING ANY RAINSTORM EVENT THAT GENERATES STORMWATER LEAVING THE SITE.

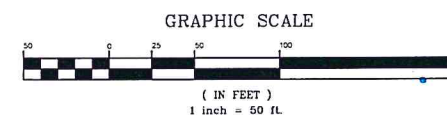
CONSTRUCTION ON THE NEXT SUBSEQUENT PHASE SHALL NOT OCCUR UNTIL THE PREVIOUS PHASE HAS BEEN COMPLETED WITH ALL STORMWATER AND EROSION AND SEDIMENT CONTROL DEVICES IN PLACE HAVING BEEN PERMANENTLY SEEDDED AND MULCHED.

1. THE PURPOSE OF THESE PLANS IS TO :
 - A. MINIMIZE THE AREA OF DISTURBED SOILS AND TO MINIMIZE THE DURATION THAT ANY AREAS ARE LEFT OPEN.
 - B. ISOLATE THE AREAS OF DISTURBANCE TO PREVENT AND CONTROL EROSION CAUSED BY RUN-OFF.
 - C. CONTROL THE AMOUNTS OF SEDIMENT THAT MAY RESULT FROM ANY SITE EROSION.
2. A COPY OF THE CONSTRUCTION GENERAL PERMIT AND A SET OF THE PLANS WILL BE AVAILABLE ON-SITE.
3. THE ON-SITE PLAN COORDINATOR IS AS SHOWN ON THIS PLAN.
4. THE ON-SITE COORDINATOR SHALL INSPECT AND KEEP A WRITTEN RECORD OF THE EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES AT A MINIMUM OF ONCE A WEEK AND ALSO WITHIN 24 HOURS OF ANY STORM EVENT THAT DISCHARGES RUN-OFF FROM THE SITE.
5. THE ON-SITE COORDINATOR SHALL KEEP A WRITTEN RECORD OF EROSION CONTROL INSPECTIONS AND ANY MONITORING DATA FOR A MINIMUM OF THREE (3) YEARS FOLLOWING COMPLETION OF CONSTRUCTION.
6. REFER TO PLAN SHEETS EC1 THROUGH EC3 FOR ALL EROSION CONTROL PLANS AND SPECIFICATIONS.

INSPECTION SCHEDULE	WEDDLY	AFTER EACH RAINFALL THAT GENERATES STORMWATER FROM SITE
INSPECT SILT FENCING	X	X
INSPECT CONSTRUCTION FENCE	X	X
INSPECT AREAS TEMPORARILY MULCHED	X	X
INSPECT TEMPORARY SOIL STOCKPILE	X	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED + MULCHED	X	X
INSPECT STORMWATER PUMPS AND WASTEWATER TRAPS	X	X

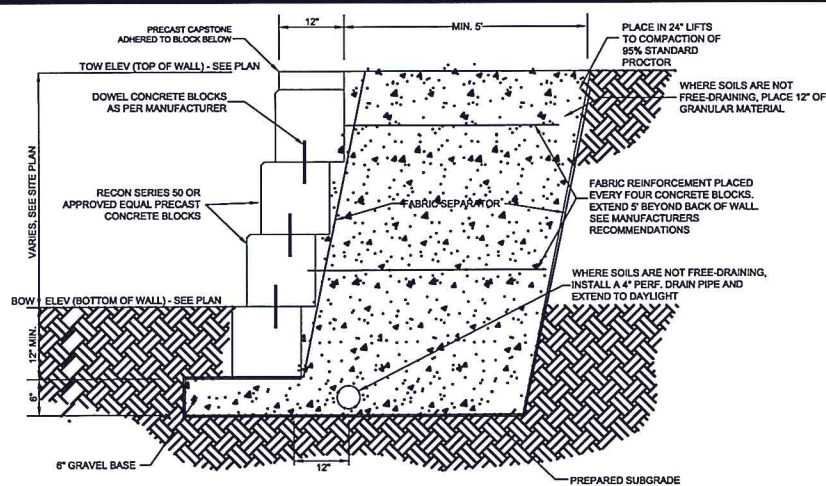
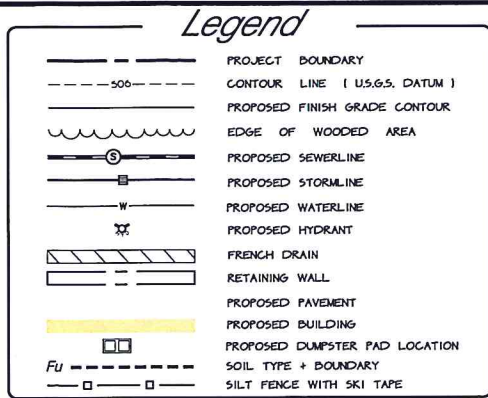
ON-SITE COORDINATOR:
PAT O'BRIEN
PHONE - (802)863-6222

NOTE: IF WINTER CONSTRUCTION WILL OCCUR BETWEEN OCTOBER 15 AND APRIL 15 REFER TO THE WINTER EROSION CONTROL GUIDELINES FOR ADDITIONAL EROSION AND SEDIMENT CONTROL REQUIREMENTS APPLYING TO ANY COMPONENT OF PROJECT AS OUTLINED ABOVE.

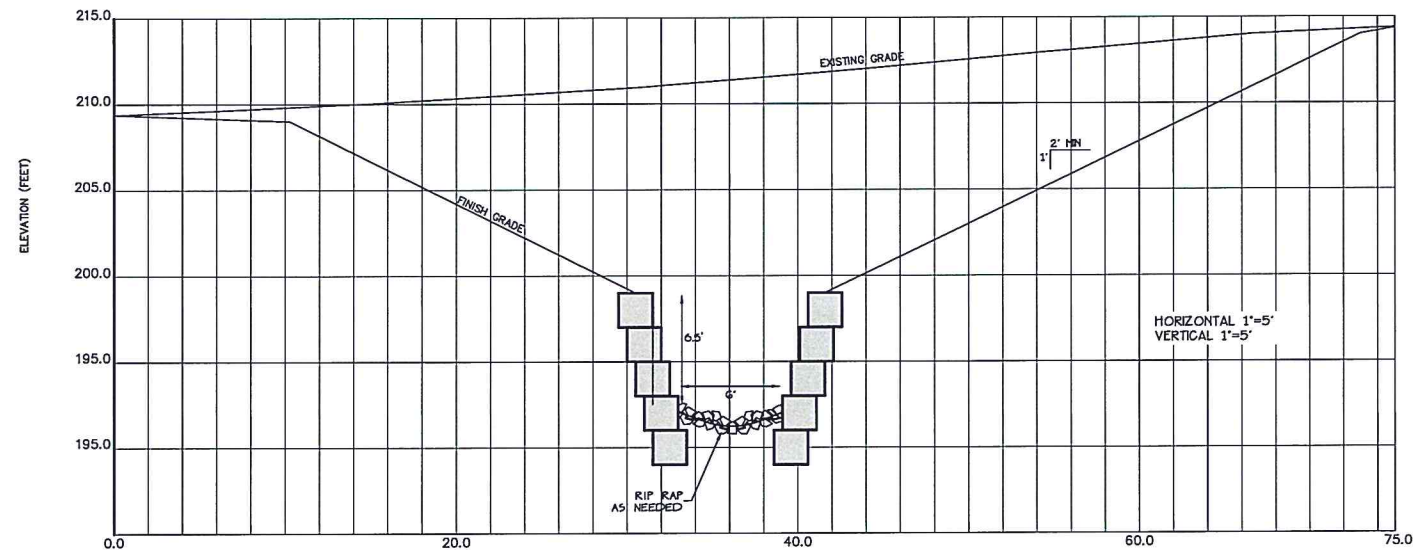


DATE 9/3/74	REVISION Updated for Final Submittal
SURVEY OBCA	☐ RECORD DRAINING ☒ PRELIMINARY
DESIGN OTHERS:OBCA	☐ FINAL ☐ SKETCH/CONCEPT
DRAWN BWC	O'LEARY-BURKE CIVIL ASSOCIATES, PLC 1 CORPORATE DRIVE, SUITE 1 ESSEX, VT
CHECKED FJO	
SCALE	

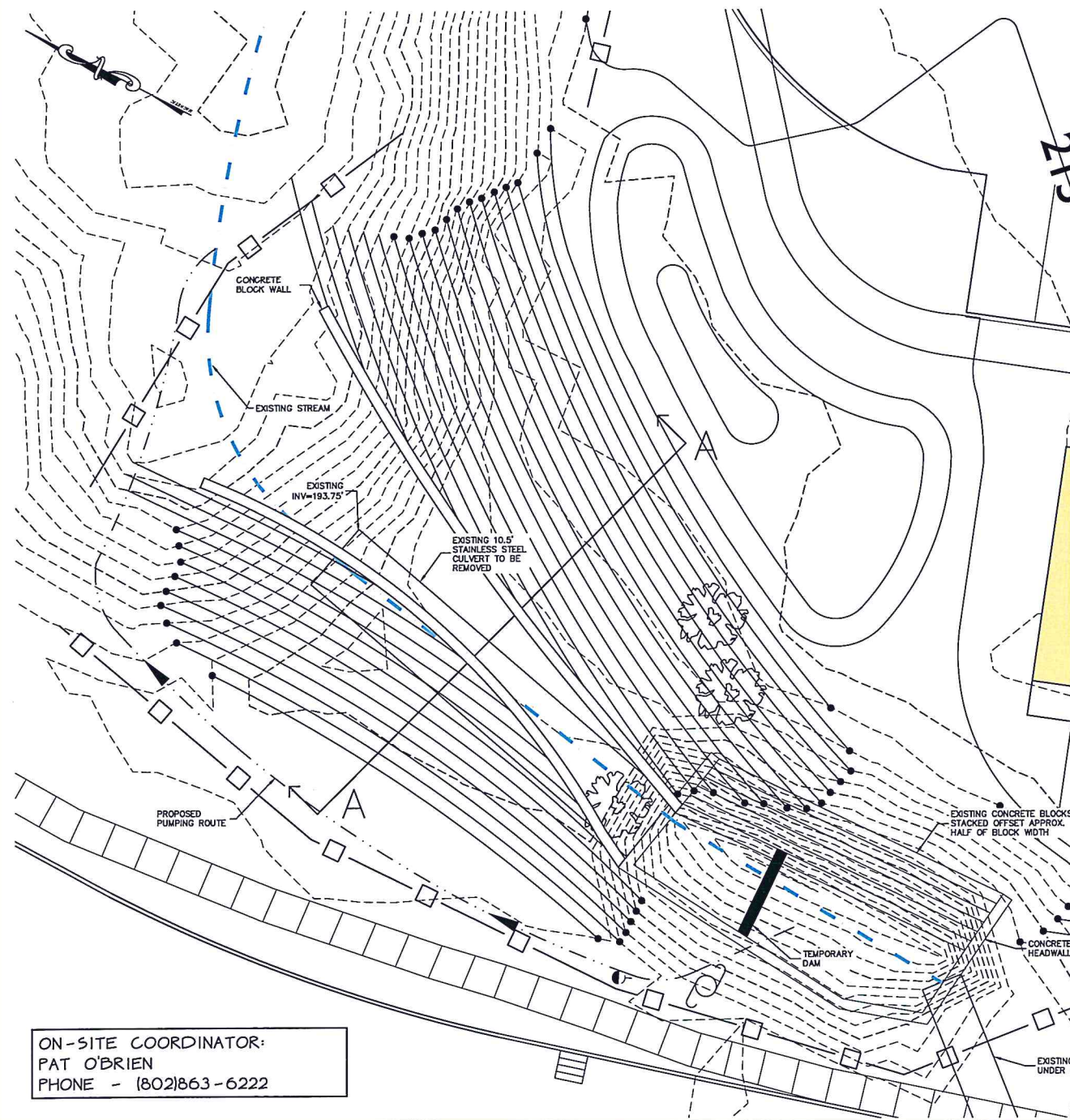
<i>IRELAND PROPERTY</i>		DATE 1-15-14
Grave Street		JOB# 2011-52
Burlington, VT		FILE 2011-52-BUFF
<i>EROSION CONTROL PLAN POST-CONSTRUCTION</i>		PLAN SHEET EC4



RETAINING WALL DETAIL
NTS



CONCRETE BLOCK WALL SECTION A-A



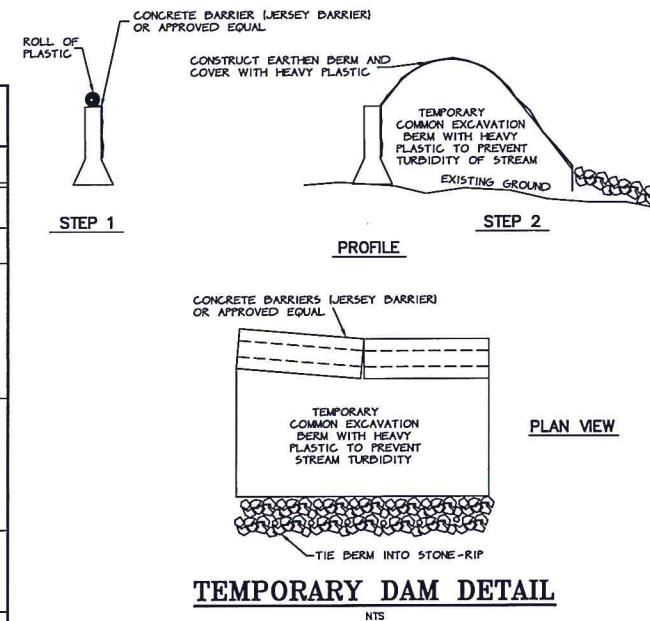
ON-SITE COORDINATOR:
PAT O'BRIEN
PHONE - (802)863-6222

EROSION PREVENTION & SEDIMENT CONTROL

THE ON-SITE COORDINATOR SHALL INSPECT THE SITE AND THE SEDIMENT CONTROL MEASURES A MINIMUM OF ONCE EVERY DAY, PRIOR TO PREDICTED STORM EVENTS AND WITHIN 24 HOURS FOLLOWING ANY PRECIPITATION WITH A VOLUME LARGE ENOUGH TO DISCHARGE RUN-OFF FROM THE SITE. THE WEEKLY REPORT WILL BE KEPT ON-SITE.

CONSTRUCTION SEQUENCE

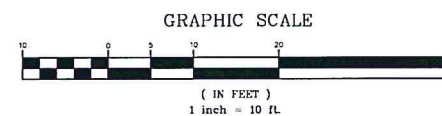
MAJOR CONSTRUCTION ITEM	EROSION CONTROL	MAINTENANCE
1. MARK LIMITS OF AREA TO BE DISTURBED.	INSTALL PROJECT DEMARCATION FENCE AS SHOWN ON THE PLANS.	MAINTAIN UNTIL CONSTRUCTION IS COMPLETED.
4. BYPASS PUMP	A PUMP APPROVED BY THE ENGINEER WILL BE SETUP TO PUMP THE STREAM FLOW AROUND THE EXISTING CULVERT AND AREA OF EXCAVATION TO AN ESTABLISHED DOWNSTREAM LOCATIONS A BACKUP PUMP MUST BE LOCATED ON-SITE FOR UNEXPECTED EVENTS IN STREAM FLOW OR MECHANICAL FAILURE EACH PUMP WILL HAVE TWICE THE CAPACITY OF THE AVERAGE STREAM FLOW	CAREFUL ATTENTION SHALL BE UTILIZED TO ENSURE THAT THE DAM SYSTEM IS FUNCTIONING PROPERLY AND NO EROSION IS TAKING PLACE. ANY SIGN OF INSTABILITY OR TURBIDITY SHALL BE ADDRESSED IMMEDIATELY.
4. INSTALL BYPASS DAM	CHECK THE 7-DAY WEATHER FORECAST TO THE SATISFACTION OF THE PROJECT MANAGER. A CONCRETE JERSEY BARRIER OR APPROVED DIVERSION DEVICE SHALL BE PLACED IN THE STREAM TO DIRECT FLOW TO THE TEMPORARY BY-PASS SWALE. CONSTRUCT AN EARTHEN BERM BEHIND THE CONCRETE BARRICADE AS SHOWN ON THE DIVERSION DETAIL.	STONE FILL SHALL BE READILY AVAILABLE AT ALL TIMES.
3. INSTALL SILT FENCE	INSTALL SILT FENCE AS SHOWN ON PLAN	MAINTAIN SILT FENCE AND REMOVE DEPOSITS OF SILT. REMOVE AND REPLACE DAMAGED SECTIONS AS ORDERED BY THE ON-SITE COORDINATOR. SILT FENCES IN THE DISTURBED AREAS ARE TO BE MAINTAINED UNTIL GRASS IS ESTABLISHED.
2. CLEARING	CLEAR THE TREES AND BRUSH IN THE VICINITY OF THE EXCAVATION AREA.	THE TREES AND BRUSH TO BE CUT SHALL BE HAULED OFF SITE.
4. GRUBBING AND TOPSOIL STOCKPILING	ANY STUMPS ARE TO BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. A SILT FENCE IS TO BE INSTALLED AROUND THE BASE OF THE STOCKPILES OR AS ORDERED BY THE ON-SITE COORDINATOR. STOCKPILES AND DISTURBED AREAS ARE TO BE MULCHED WITHIN 7 DAYS OR AS APPROVED BY THE ON-SITE COORDINATOR OR PROJECT MANAGER.	SILT FENCES ARE TO BE MAINTAINED UNTIL THE STOCKPILES HAVE BEEN REMOVED. IN-USE AREAS OF THE STOCKPILES ARE TO BE REMULCHED IF UNUSED FOR MORE THAN A WEEK.
5. EXCAVATE THE AREAS AS SHOWN ON THE PLANS IN ORDER REMOVE THE EXISTING CULVERT	EXCAVATE THE AREA TO THE GRADES SHOWN ON THE PLANS FOR THE INSTALLATION IN ORDER TO REMOVE THE EXISTING CULVERT. EXCAVATED MATERIAL SHALL BE PLACED IN A DRY AREA AND SILT FENCE SHALL BE INSTALLED AT THE BASE ON THE DOWN-SLOPE SIDE OR AS ORDERED BY THE ON-SITE COORDINATOR.	CAREFUL ATTENTION SHALL BE UTILIZED TO ENSURE THE GRADING OF THE EXCAVATED MATERIAL IS PLACED IN A SUITABLE AREA IN ORDER TO ENSURE THAT FILL IS CONTAINED AND DOES NOT FLOW BACK INTO THE STREAM.
9. INSTALL STREAM STABILIZATION	INSTALL STREAM STABILIZATION AS SHOWN IN THE DETAIL.	THE RIP-RAP CHANNEL SHALL BE INSPECTED DAILY AND IMMEDIATELY UPON A RAINFALL EVENT.
10. REMOVE THE BYPASS DAM	REMOVE THE BYPASS DAM AND PUMP TO DIRECT STREAM TOWARD THE NEW CHANNEL.	THE EARTH BERM SHALL BE REMOVED FIRST DURING A LOW TO MODERATE FLOW SITUATION OR AS DIRECTED BY THE PROJECT MANAGER. STONE RIP-RAP SHALL BE PLACED IN THE AREA OF THE OPEN EXCAVATION OF THE EARTH BERM AND THE TEMPORARY BARRICADES SHALL BE REMOVED.
13. BRING THE AREA TO FINAL GRADE, SEED AND MULCH	ONCE THE CHANNEL IS BROUGHT TO FINAL GRADE AREAS NOT COVERED BY RIP RAP WILL BE SEED AND MULCHED TO PROMOTE VEGETATION GROWTH. FINISH ANY MISCELLANEOUS ITEMS.	DURING THE FILL PLACEMENT, CAREFUL ATTENTION SHALL BE GIVEN TO AVOID ANY FILL OR SEDIMENT MIGRATION TO THE STREAM. JOB COMPLETE



TEMPORARY DAM DETAIL
NTS



EXISTING CULVERT TO BE REMOVED



DATE: 3/3/14
SURVEY: OBCA
DESIGN: OTHERS/OBCA
DRAWN: BLS/BWC
CHECKED: P/O
SCALE: 1"=10'

REVISION: Updated for Final Submittal
O'LEARY-BURKE CIVIL ASSOCIATES, PLC
1 CORPORATE DRIVE, SUITE 1
ESSEX, VT 05732
PHONE: 878-9800
FAX: 878-6885
E-MAIL: poleary@olearyburke.com

IRELAND PROPERTY

Grove Street Burlington, VT

EROSION CONTROL PLAN
CULVERT REMOVAL

BY: BWC
DATE: 1-15-14
JOB#: 2011-52
PLAN SHEET # EC5

SNOW MANAGEMENT PLAN :

FOLLOWING THE ACCUMULATION OF ANY SNOW FALL EVENT WHICH GENERATES MORE THAT 1' OF SNOW OR ICE THE SITE SHALL BE CLEARED. ALL SNOW STORAGE AREAS SHALL BE DOWN GRADIENT OF ANY DISTURBED AREAS AND THE STORAGE OF SNOW IN STORMWATER TREATMENT STRUCTURES IS PROHIBITED.

MULCHING SPECIFICATIONS

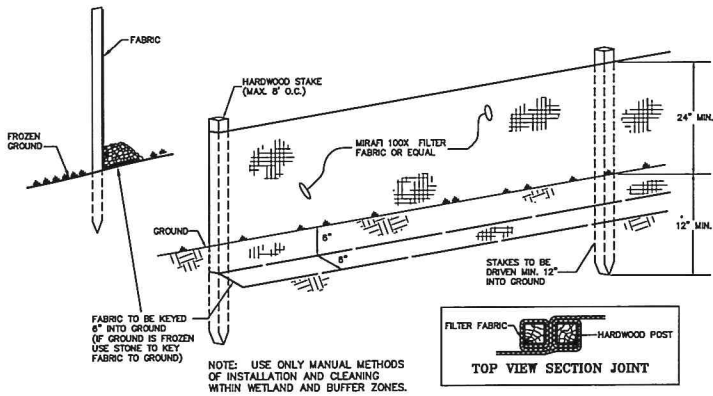
DISTURBED AREAS ARE TO BE MULCHED WITHIN A WEEK OF DISTURBANCE. HAY MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AT A RATE THAT IS SUFFICIENT TO PROVIDE ADEQUATE COVERAGE.

WHERE FINISH GRADE AND TOPSOILED, SEEDING AND MULCHING IS TO BE APPLIED WITHIN 48 HOURS.

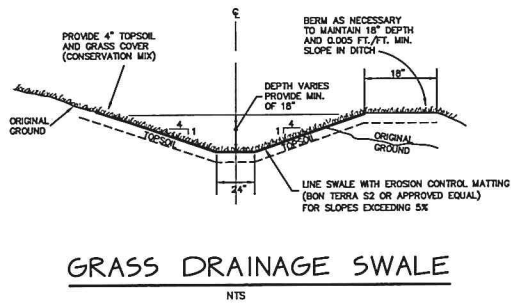
LANDSCAPING SPECIFICATIONS

FINISHED AREAS ARE TO BE SEEDED AND MULCHED WITHIN 48 HOURS OF TOPSOILING. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND BE SEEDED, FERTILIZED, LIMED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:

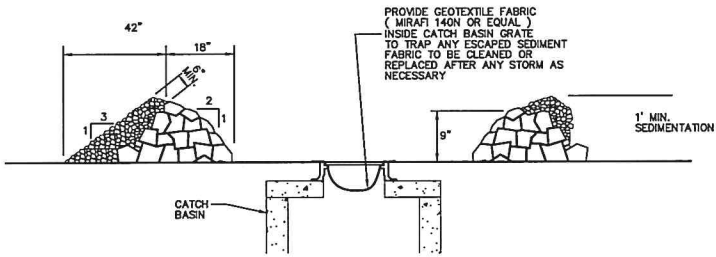
1. SEED MIXTURE IN ALL AREAS SHALL BE URBAN MIX CONFORMING TO THE TABLE SHOWN ON THE PLANS.
2. FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-2-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE, AND 100 POUNDS OF POTASH PER ACRE.
3. LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE OR AS DIRECTED.
4. WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIME, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AT A RATE THAT IS SUFFICIENT TO ENSURE ADEQUATE COVERAGE.



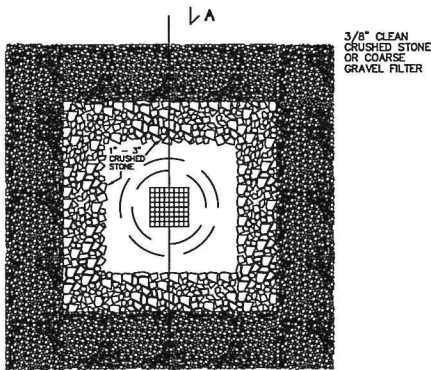
SILT FENCE
NTS



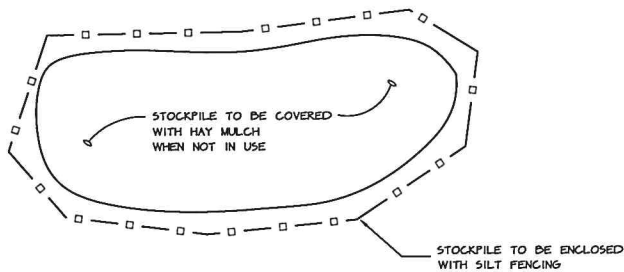
GRASS DRAINAGE SWALE
NTS



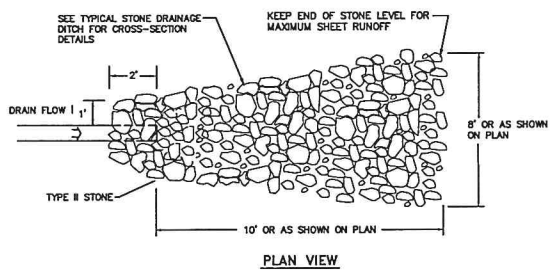
SECTION A - A



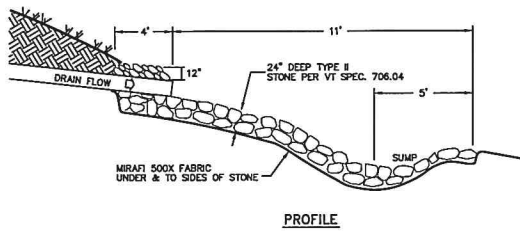
INLET PROTECTION DETAIL
NTS



TEMPORARY FILL MATERIAL STOCKPILE
NTS

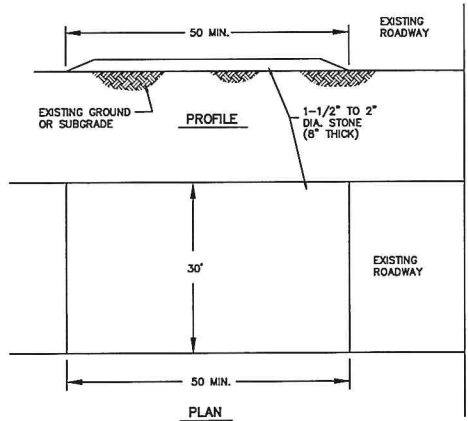


PLAN VIEW



PROFILE

STORM OUTFALL DETAIL
NTS

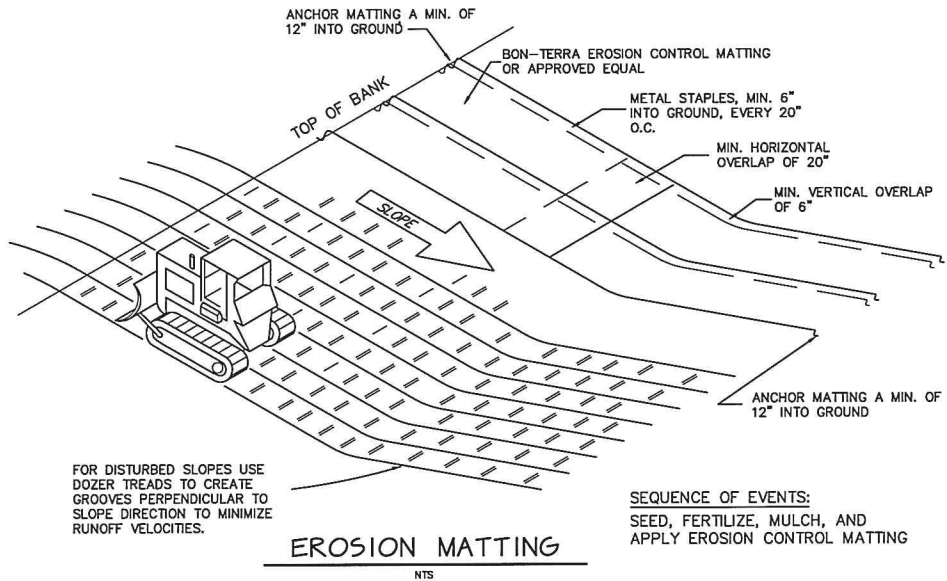


PLAN

- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT TRACKED, SPILLED, OR WASHED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.
 2. THE USE OF CALCIUM CHLORIDE OR WATER MAY BE NECESSARY TO CONTROL DUST DURING THE SUMMER.
 3. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.

STABILIZED CONSTRUCTION ENTRANCE
NTS

MIX #1: CREEPING RED FESCUE + PERENNIAL RYEGRASS		
LBS. LIVE SEED PER ACRE	TYPE OF SEED	
50	10	ESTYLA, PENNLAWN, BOREAL
50	10	PENNFINE, LINN
100	20	100% LIVE SEED PER ACRE



EROSION MATTING
NTS

SEQUENCE OF EVENTS:
SEED, FERTILIZE, MULCH, AND
APPLY EROSION CONTROL MATTING



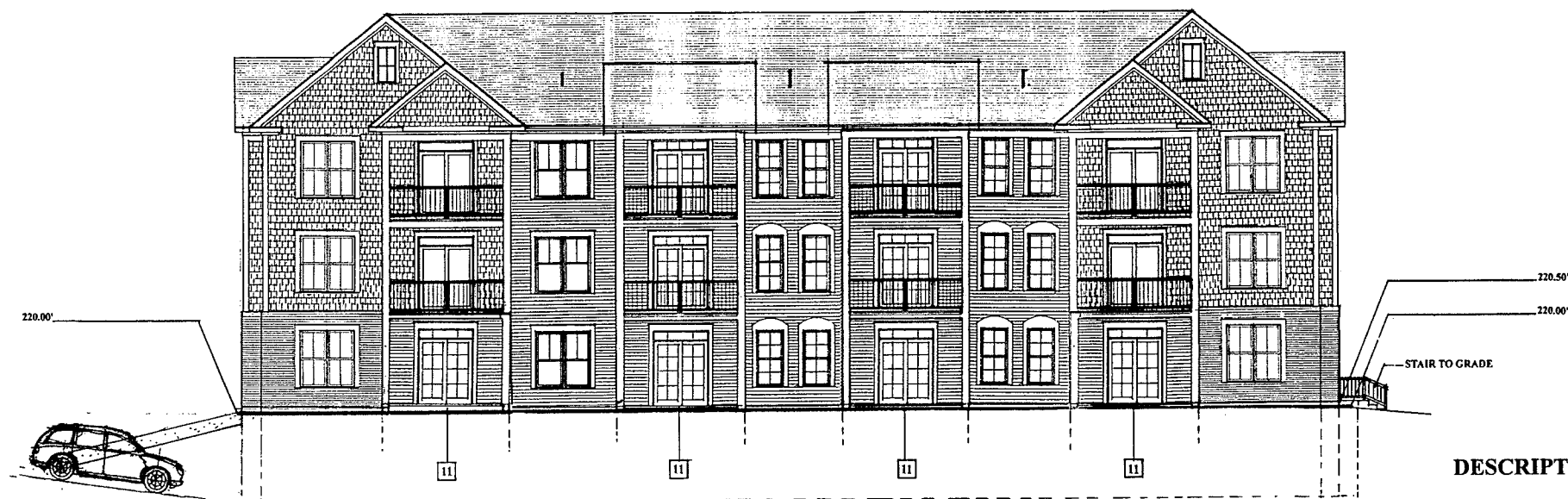
DATE: 9/2/14	REVISION: Updated for Final Submittal	BY: BWC
SURVEY: OBCA	☐ RECORD DRAINING ☒ PRELIMINARY	DATE: 1-15-14
DESIGN: OTHERS/OBCA	☐ FINAL ☐ SKETCH/CONCEPT	DATE: 2011-52
DRAWN: BWC	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	FILE: 2011-52-BUFFER
CHECKED: FJD	1 CORPORATE DRIVE, SUITE 1 ESSEX, VT 05732 PHONE: 878-9000 FAX: 878-9000	PLAN SHEET #
SCALE:		

IRELAND PROPERTY

Grove Street Burlington, VT

EROSION CONTROL PLAN DETAILS

EC6



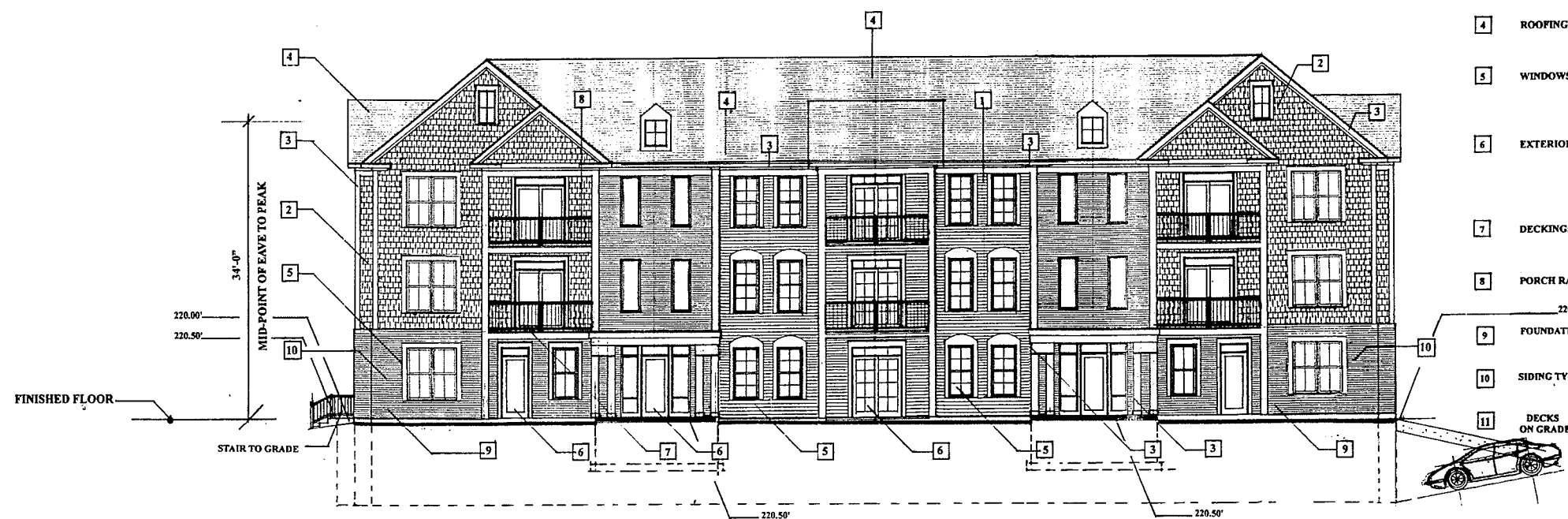
REAR ELEVATION
1/8" = 1'-0"

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|------------------------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE.
COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL 'SHINGLE' SIDING WITH 6 INCH EXPOSURE.
COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND
RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL.
COLOR AS SELECTED BY ARCHITECT.
SIZES AS FOLLOWS:

WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8

DOOR TRIM: 1 X 4
FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.)
COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON
FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35.
COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING.
MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A
MAXIMUM U-FACTOR OF 0.35 FOR GLAZING.
COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL.
COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | GUARDRAIL SYSTEM.
COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND
COLOR AS SELECTED BY ARCHITECT |
| 11 | DECKS | POURED-IN-PLACE CONCRETE |



FRONT ELEVATION
1/8" = 1'-0"

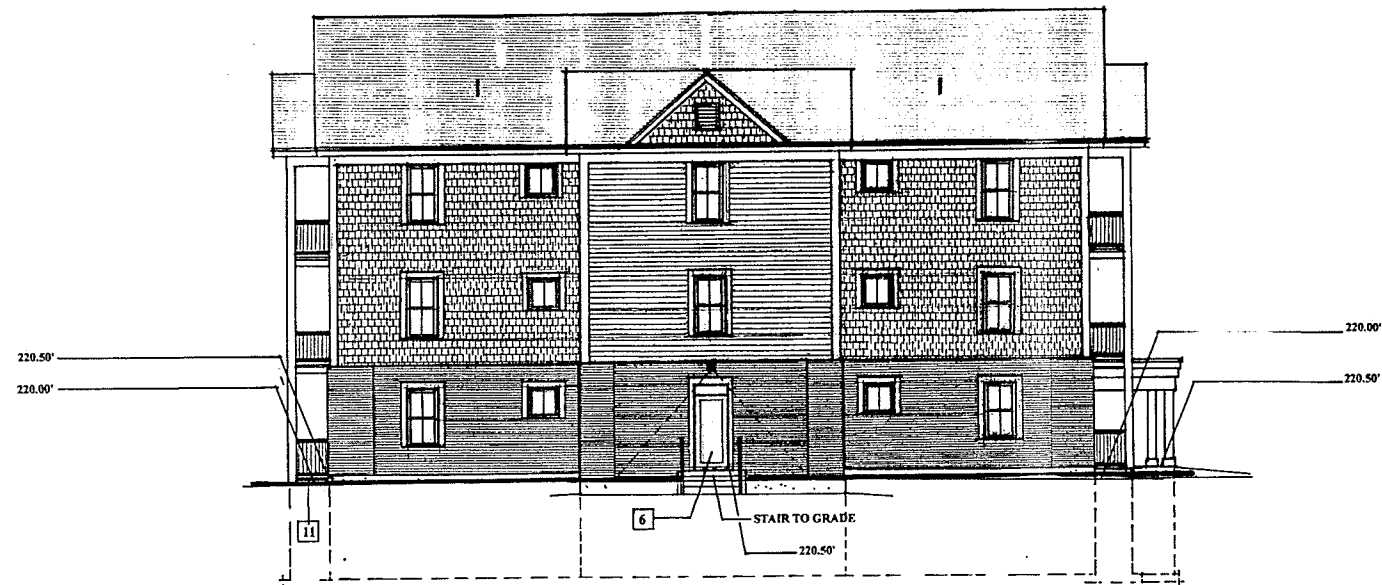
BUILDING K

FFE= 220.50'

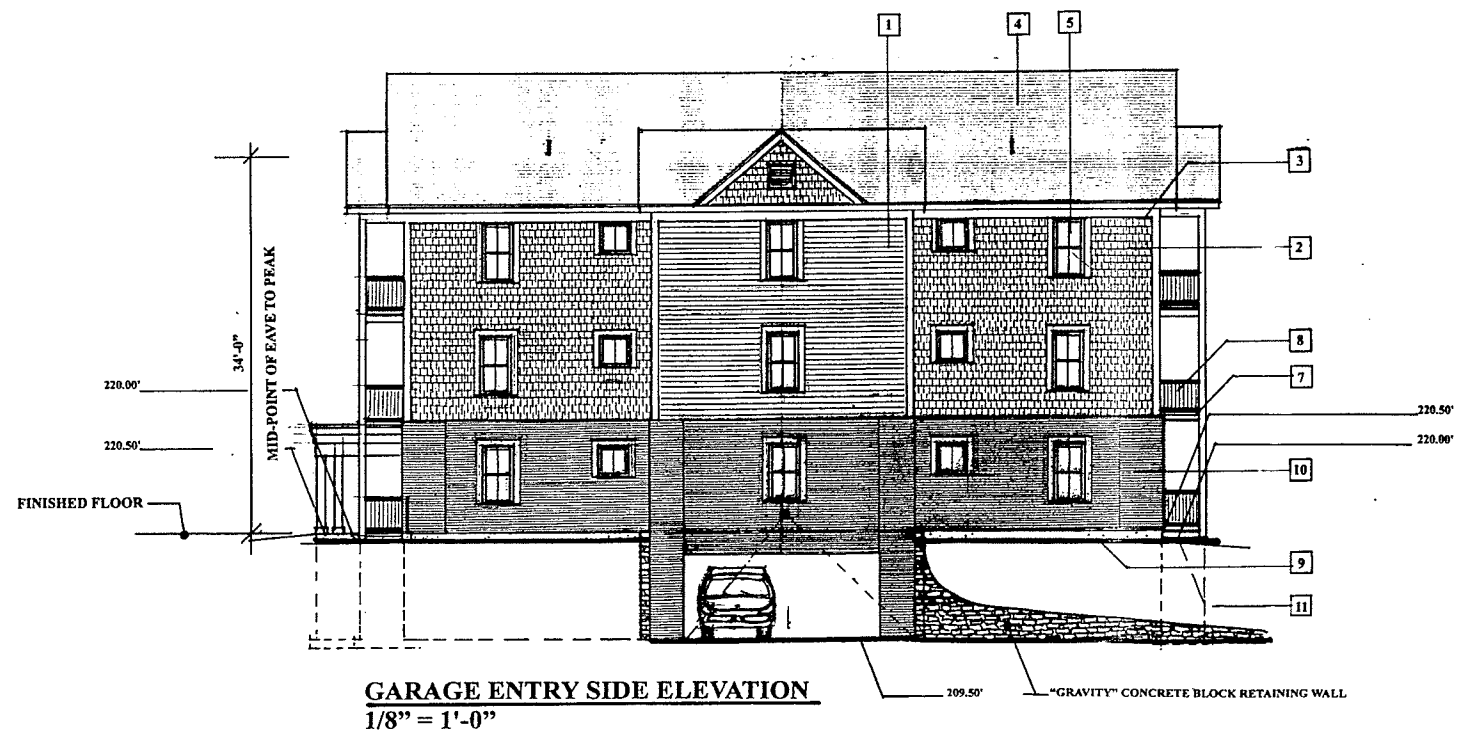
NOTE:

GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS
ON THIS DRAWING PRIOR TO CONSTRUCTION.

GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR CONSTRUCTION.



ON-GRADE ENTRY SIDE ELEVATION
1/8" = 1'-0"



GARAGE ENTRY SIDE ELEVATION
1/8" = 1'-0"

BUILDING K

FFE= 220.50'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL 'SHINGLE' SIDING WITH 6 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8
DOOR TRIM: 1 X 4
FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3 | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR CONSTRUCTION.



GARAGE ENTRY ELEVATION OF
BUILDING K

ON-GRADE ENTRY ELEVATION OF
BUILDING K



GARDEN STREET APARTMENTS
21 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-3.1

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FRONT ELEVATION OF
BUILDING I
REAR ELEVATION OF
BUILDING I

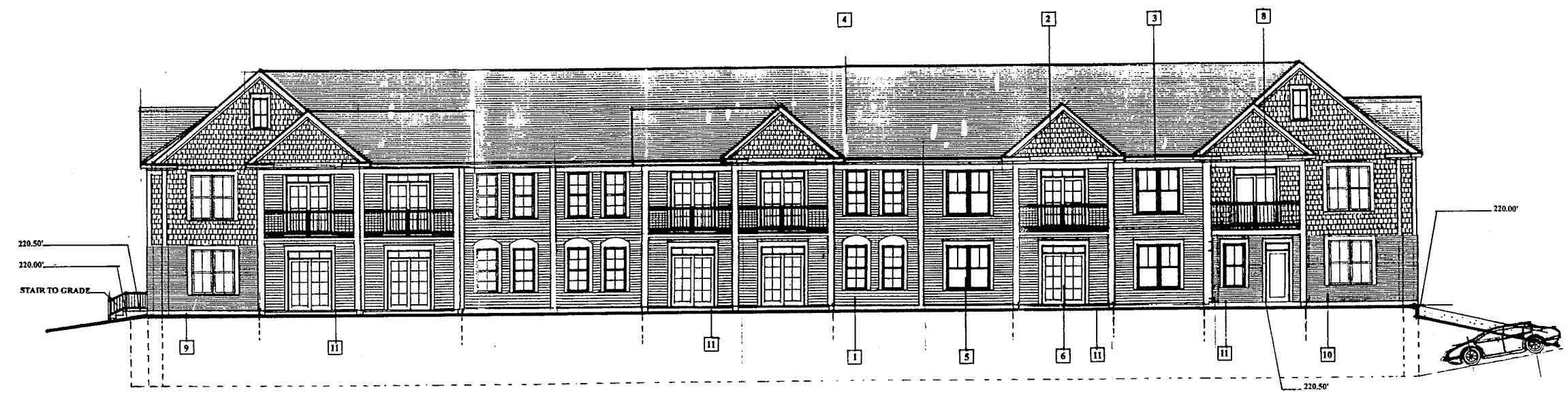
MICHAEL DUGAN
ARCHITECT
22 GARDEN STREET
BURLINGTON, VT 05401
TEL: 802.255.1234
FAX: 802.255.1235

GARDEN STREET APARTMENTS
22 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

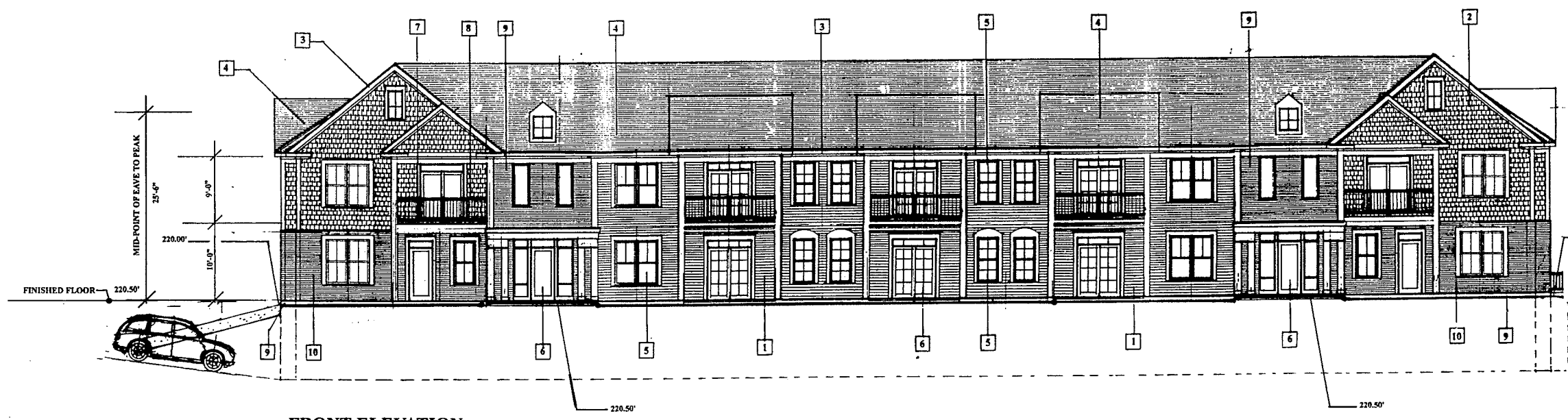


FEBRUARY 16, 2015

A-3A.



REAR ELEVATION
1/8" = 1'-0"



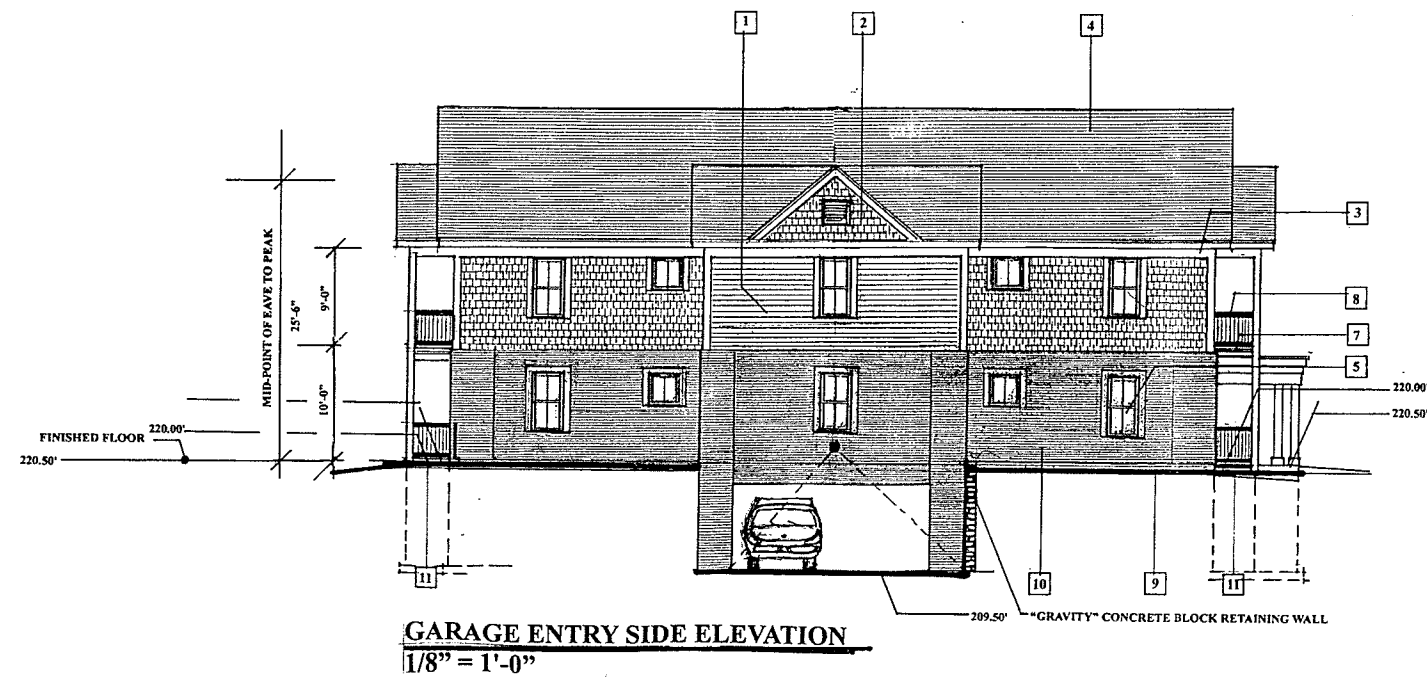
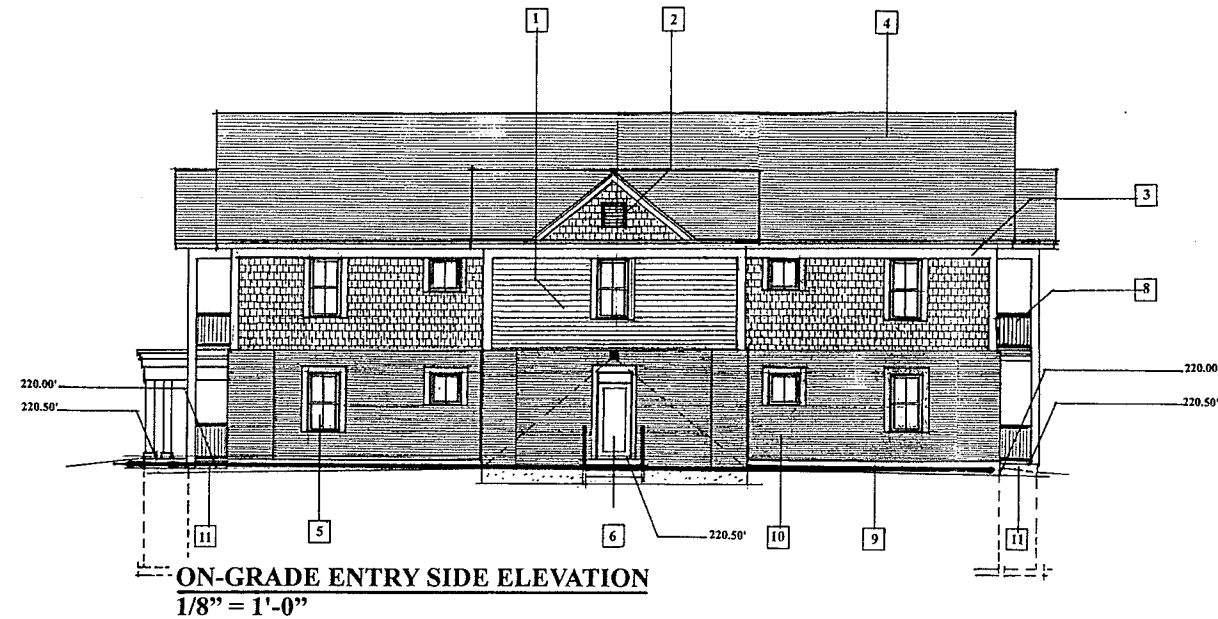
FRONT ELEVATION
1/8" = 1'-0"

BUILDING I
FFE= 220.50'

DESCRIPTION OF EXTERIOR MATERIALS

- 1 SIDING TYPE - 1 VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT.
- 1 SIDING TYPE - 2 VINYL SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT.
- 3 STANDING AND RUNNING TRIM TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4 DOOR TRIM: 1 X 4
CORNER TRIM: 1 X 8 PRIZE TRIM: 1 X 10
- 4 ROOFING: ASPHALT 3-DIMENSIONAL STYLE SHINGLES (25 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT.
- 5 WINDOWS: EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT.
- 6 EXTERIOR DOORS: INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.39 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT.
- 7 DECKING: DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT.
- 8 PORCH RAILINGS: GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT.
- 9 FOUNDATIONS: POURED-IN-PLACE CONCRETE
- 10 SIDING TYPE 3: BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT.
- 11 DECKS ON GRADE: POURED-IN-PLACE CONCRETE

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSION ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR CONSTRUCTION.



DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8
DOOR TRIM: 1 X 4
PIECES TRIM: 1 X 8 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
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| 11 | DECKS ON GRADE: | POURED-IN-PLACE CONCRETE |

BUILDING I

FFE= 220.50'



NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSION ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

GARAGE ENTRY ELEVATION OF
BUILDING I
ON-GRADE ELEVATION OF

MICHAEL DUGAN
REGISTERED ARCHITECT
44 JANE STREET
BURLINGTON, VT 05401
PHONE: 860-249-1111
FAX: 860-249-1112

GARDEN STREET APARTMENTS
22 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-3A.

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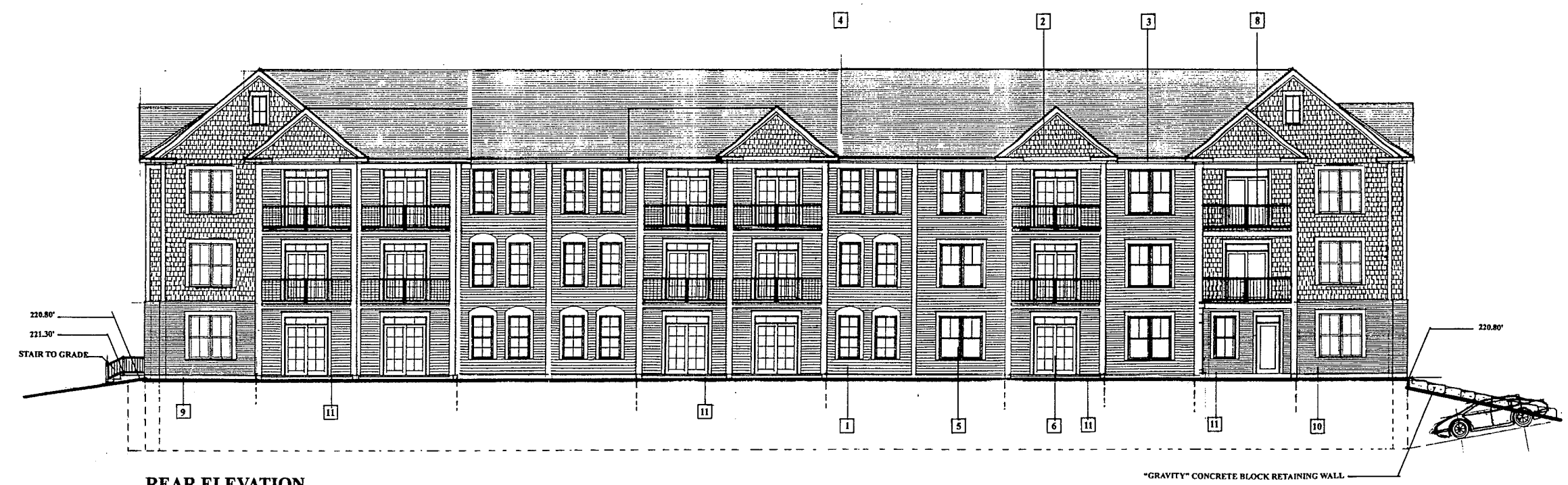
FRONT ELEVATION OF
BUILDING J
REAR ELEVATION OF
BUILDING J



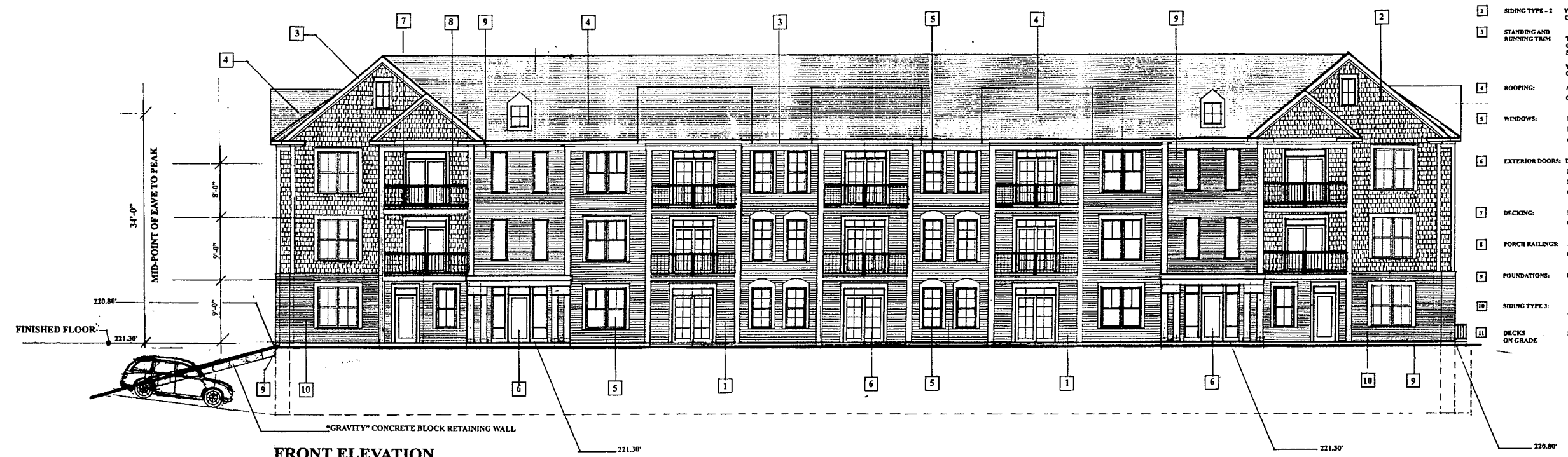
GARDEN STREET APARTMENTS
33 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-4.0



REAR ELEVATION
1/8" = 1'-0"



FRONT ELEVATION
1/8" = 1'-0"

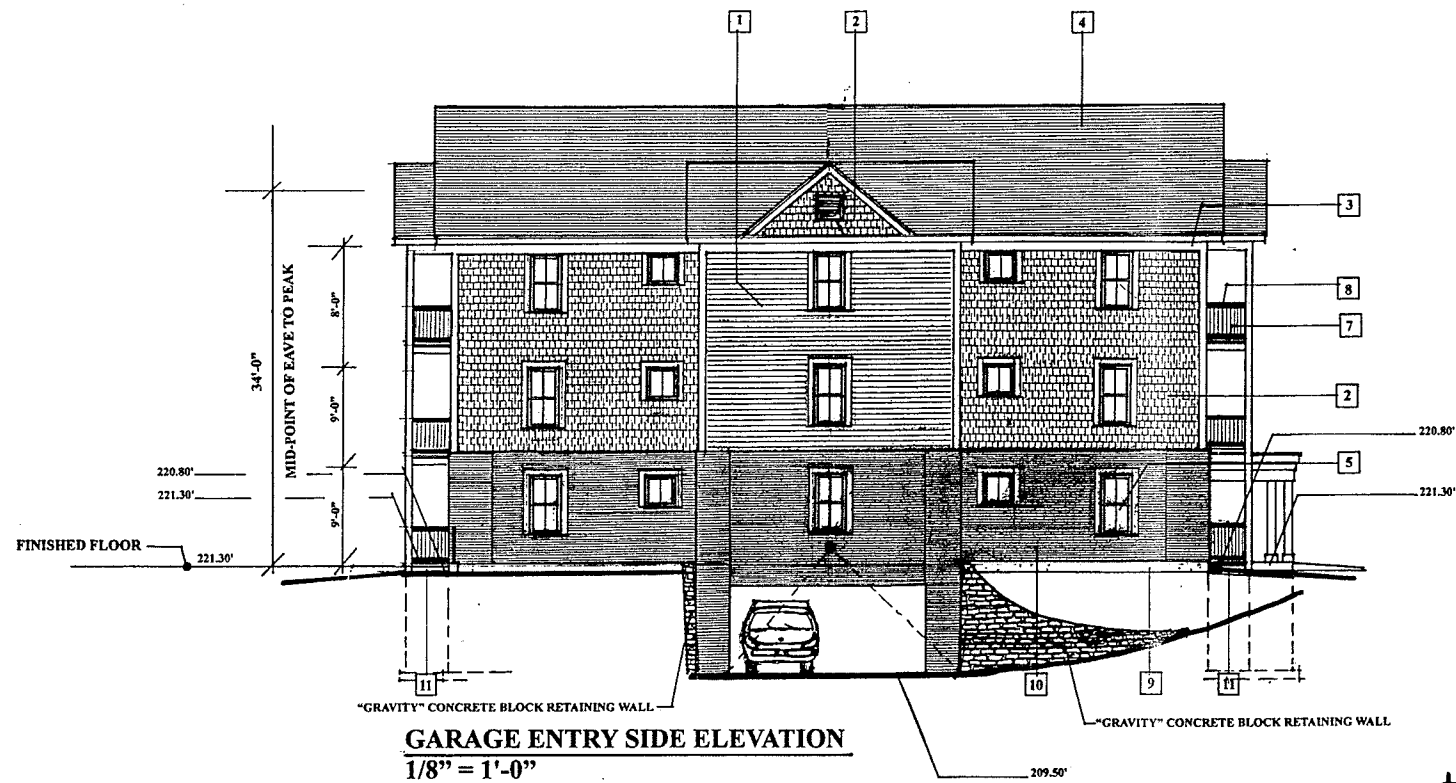
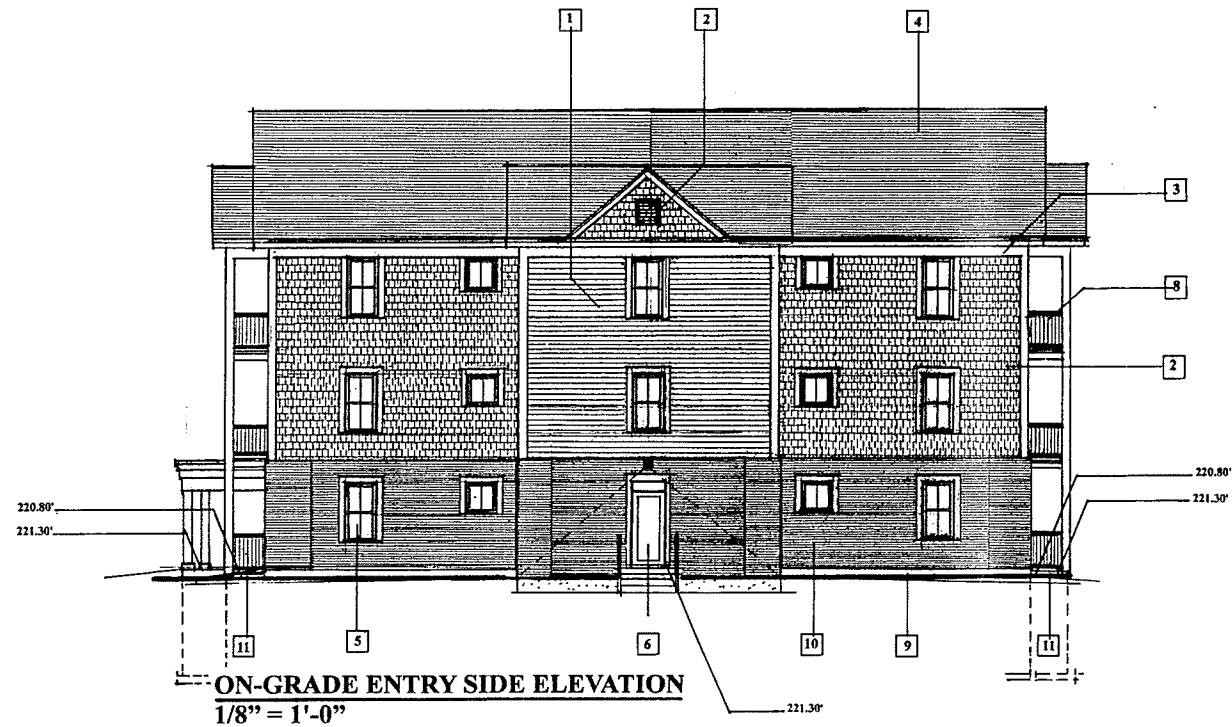
BUILDING J
FFE= 221.30'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8
DOOR TRIM: 1 X 4
PIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND COLOR AS SELECTED BY ARCHITECT |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR CONSTRUCTION.





BUILDING J

FFE= 221.30'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL "SHINGLE" SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 4
DOOR TRIM: 1 X 4
PIZZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.33. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE | "POURED-IN-PLACE CONCRETE" |



NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

FEBRUARY 16, 2015

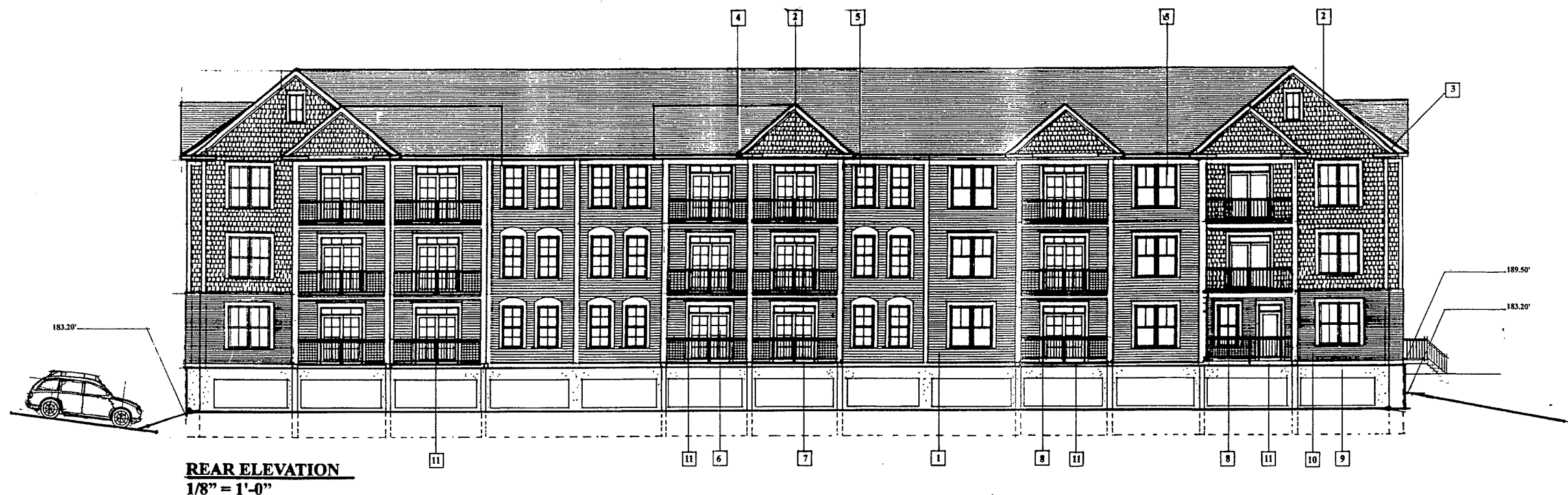
A-4.1

GARAGE ENTRY ELEVATION OF
BUILDING J
ON-GRADE ELEVATION OF

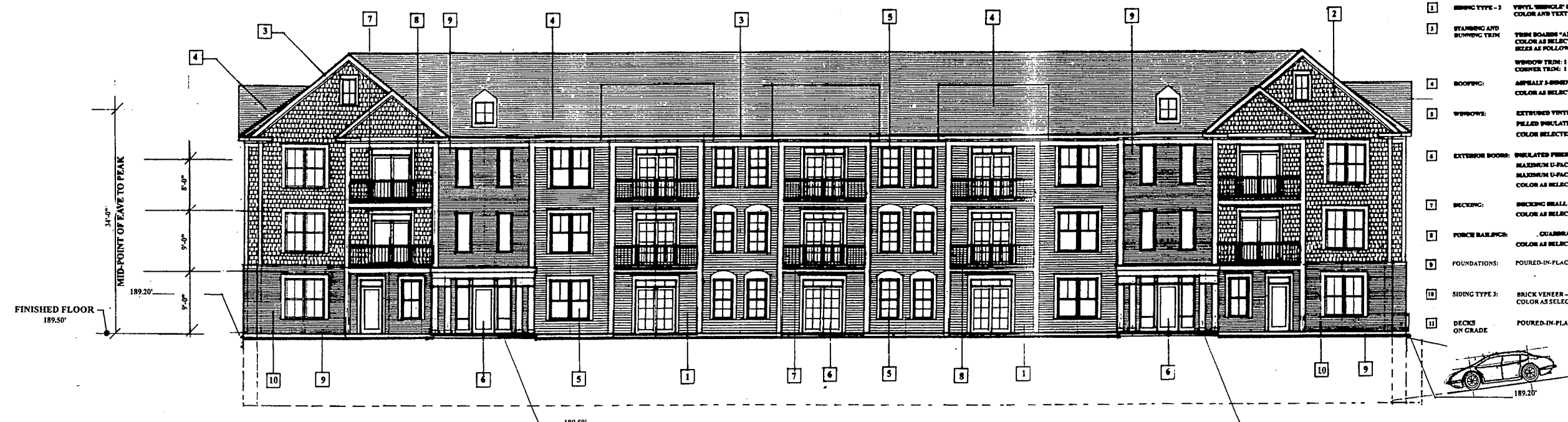
MICHAEL L. DUGAN
VERMONT ARCHITECT
33 GARDEN STREET
BURLINGTON, VT 05401
(802) 253-1111
www.mldugan.com

GARDEN STREET APARTMENTS
33 UNIT BUILDING
GARDEN STREET
BURLINGTON VERMONT

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REAR ELEVATION
1/8" = 1'-0"



FRONT ELEVATION
1/8" = 1'-0"

BUILDING S

FFE= 189.50'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. |
| 4 | ROOFING | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (25 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | POURCE RAILINGS | QUARTERAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND COLOR AS SELECTED BY ARCHITECT |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |

NOTE:
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GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.



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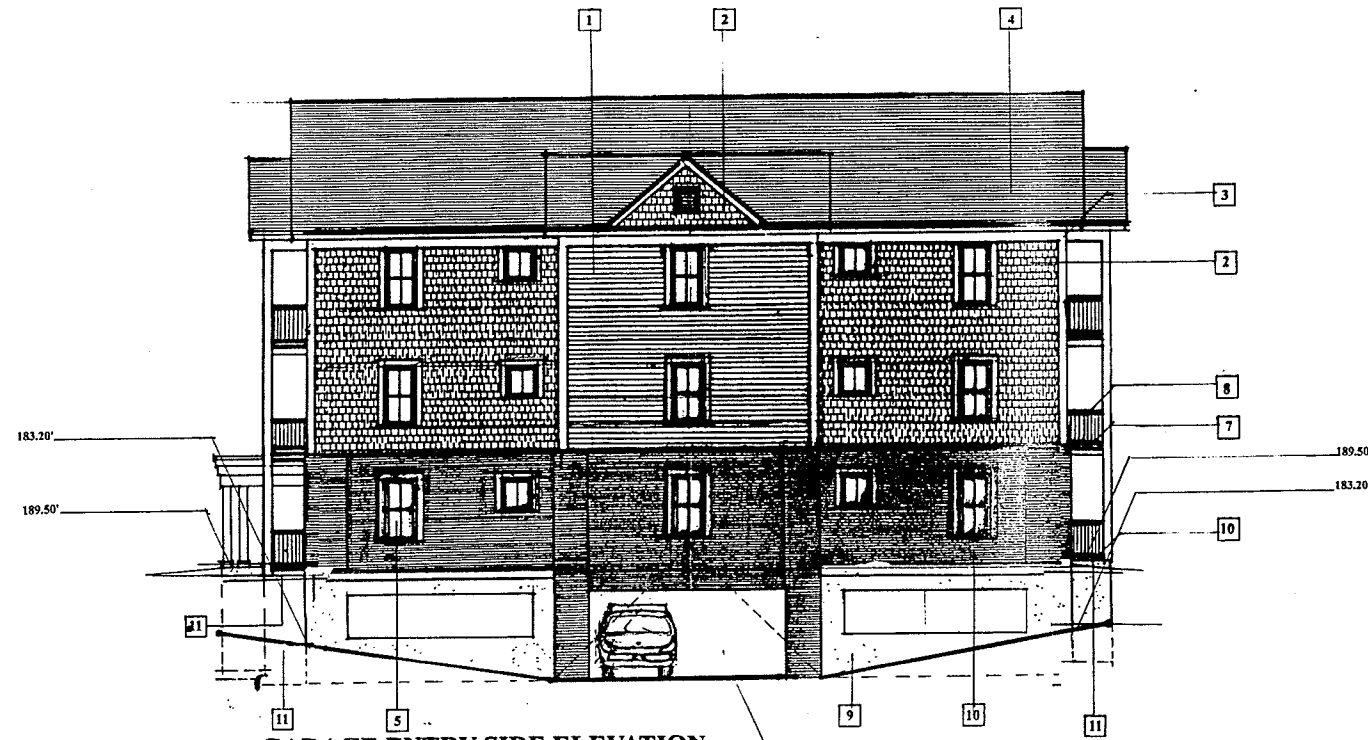
FRONT ELEVATION
REAR ELEVATION
OF
BUILDING S

MICHAEL DUGAN
ARCHITECT
12345

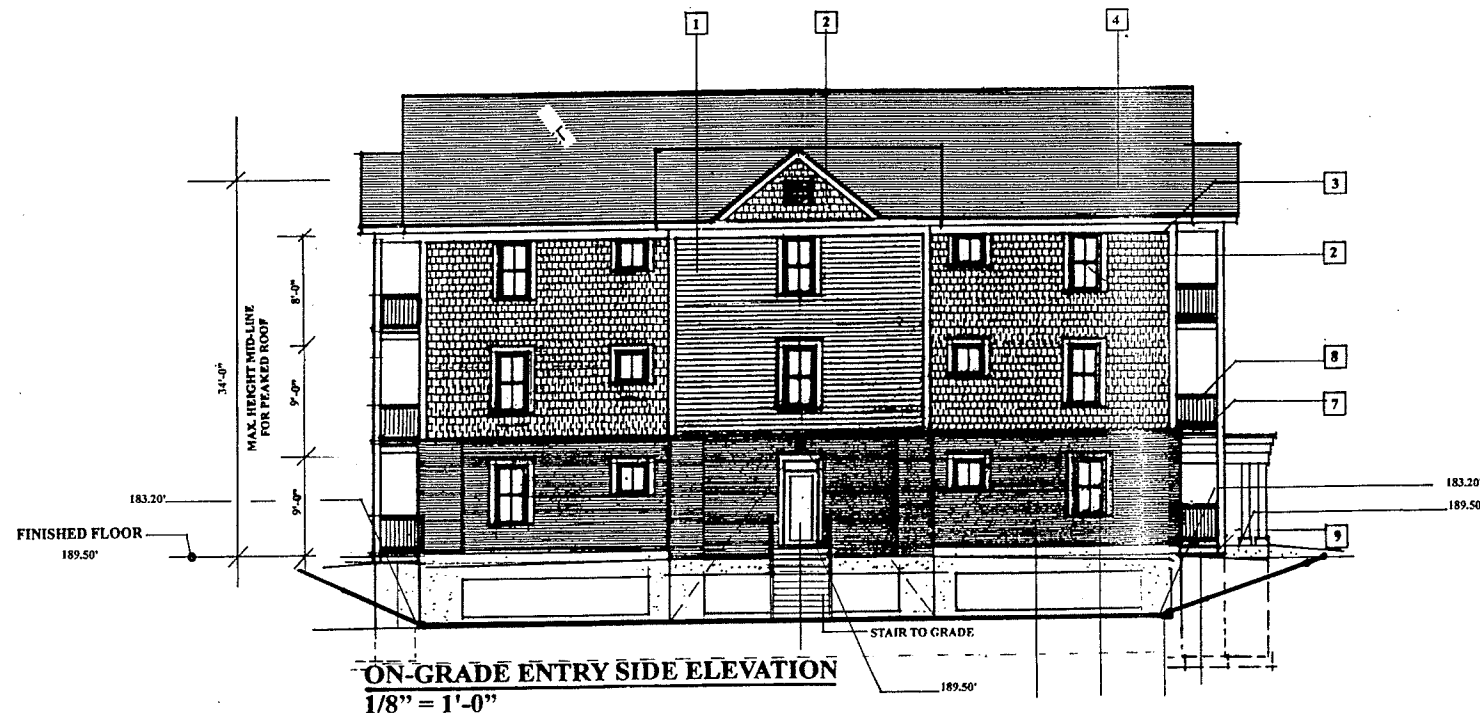
GARDEN STREET APARTMENTS
33 UNIT BUILDING OPEN-AIR GARAGE
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-5.0



GARAGE ENTRY SIDE ELEVATION
1/8" = 1'-0"



ON-GRADE ENTRY SIDE ELEVATION
1/8" = 1'-0"

BUILDING S

FFE= 189.50'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL 'SHINGLE' SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AEEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. |
| | | SIZES AS FOLLOWS: |
| | | WINDOW TRIM: 1 X 4 DOOR TRIM: 1 X 4 |
| | | CORNER TRIM: 1 X 4 FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE: | POURED-IN-PLACE CONCRETE. |



NOTE:
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GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

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**GARAGE ENTRY ELEVATION
ON-GRADE ELEVATION
OF
BUILDING S**



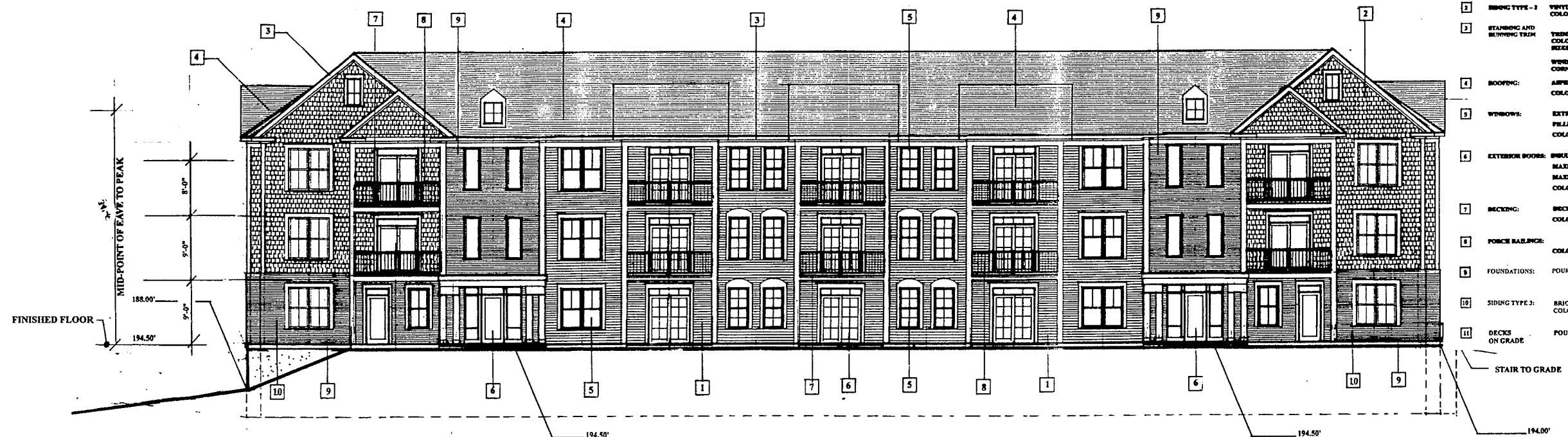
**GARDEN STREET APARTMENTS
33 UNIT BUILDING OPEN-AIR GARAGE
GARDEN STREET
BURLINGTON VERMONT**

REV'D DECEMBER 4, 2014
OCTOBER 8, 2014

A-5.1



REAR ELEVATION
1/8" = 1'-0"



FRONT ELEVATION
1/8" = 1'-0"

BUILDING T

FFE= 194.50'

DESCRIPTION OF EXTERIOR MATERIALS

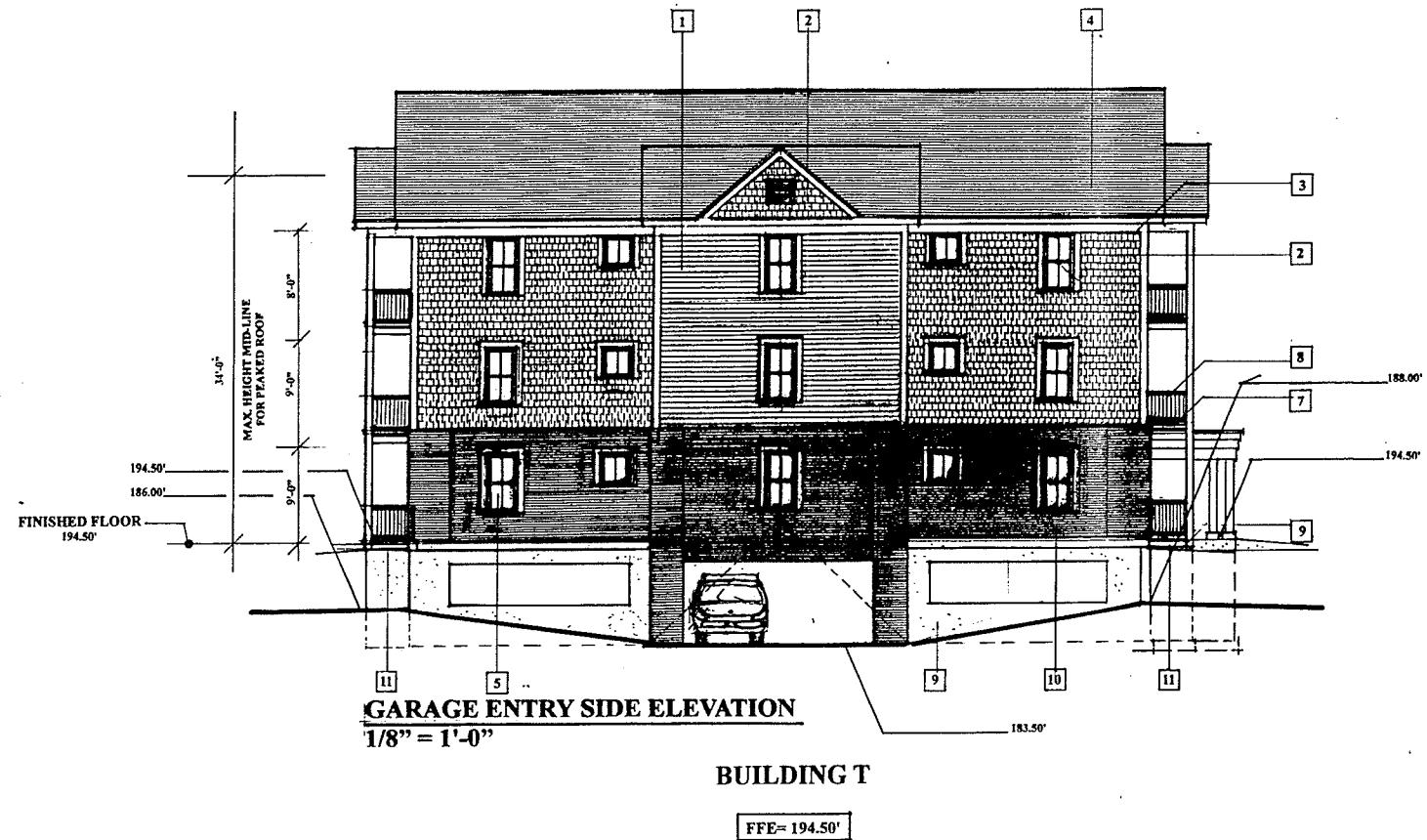
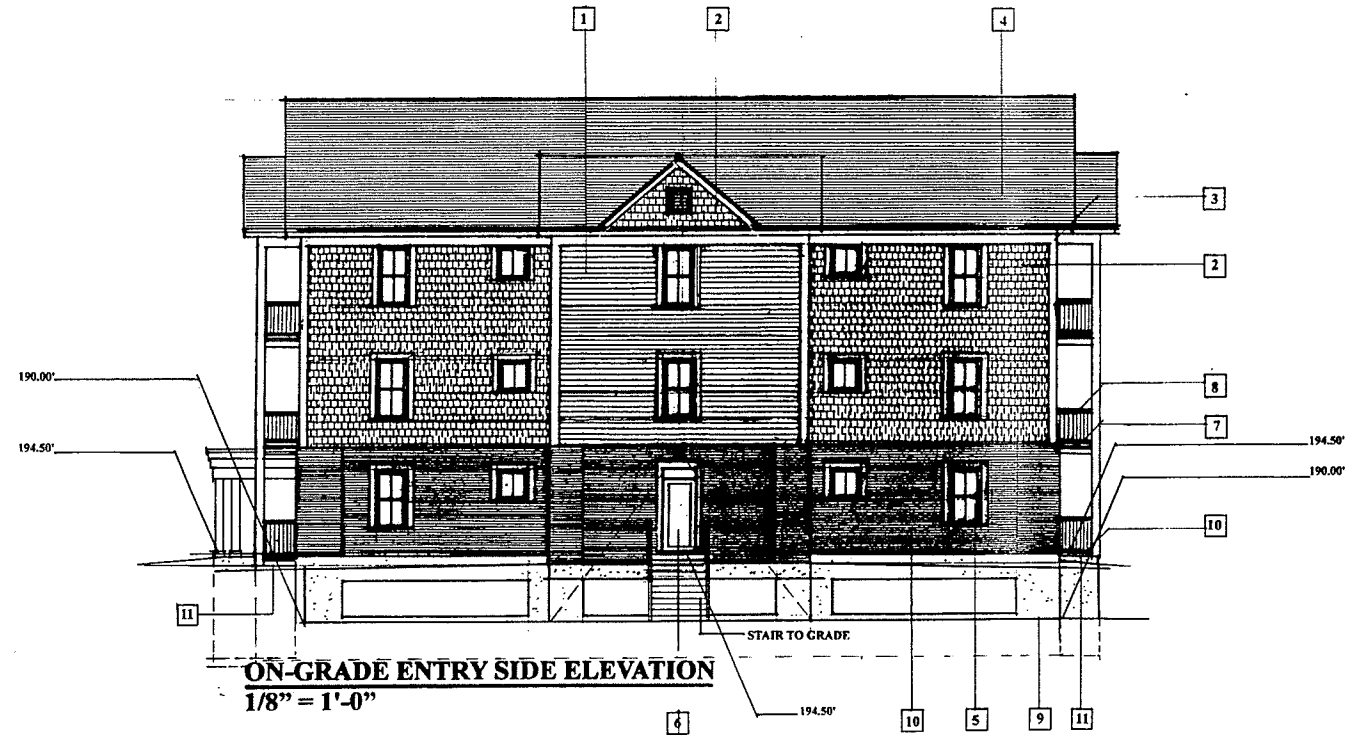
- | | | |
|----|---------------------------|---|
| 1 | ROOFING TYPE - 1 | VELUX LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | ROOFING TYPE - 2 | VELUX SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. |
| 4 | ROOFING | APPLY 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS | EXTRUDED VINYL WINDOWS W/ LOW E COATED. ARGON FILLED INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | BACKING | BACKING WALLS CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | POURCE RAILINGS | QUARTZITE SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |

NOTE:
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GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

GARDEN STREET APARTMENTS
33 UNIT BUILDING OPEN-AIR GARAGE
GARDEN STREET
BURLINGTON VERMONT

FEBRUARY 16, 2015

A-5.1



DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL 'SHINGLE' SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. |
| | | SIZES AS FOLLOWS: |
| | WINDOW TRIM: 1 X 4 | DOOR TRIM: 1 X 4 |
| | CORNER TRIM: 1 X 4 | FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (25 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.33. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE. |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE: | POURED-IN-PLACE CONCRETE. |



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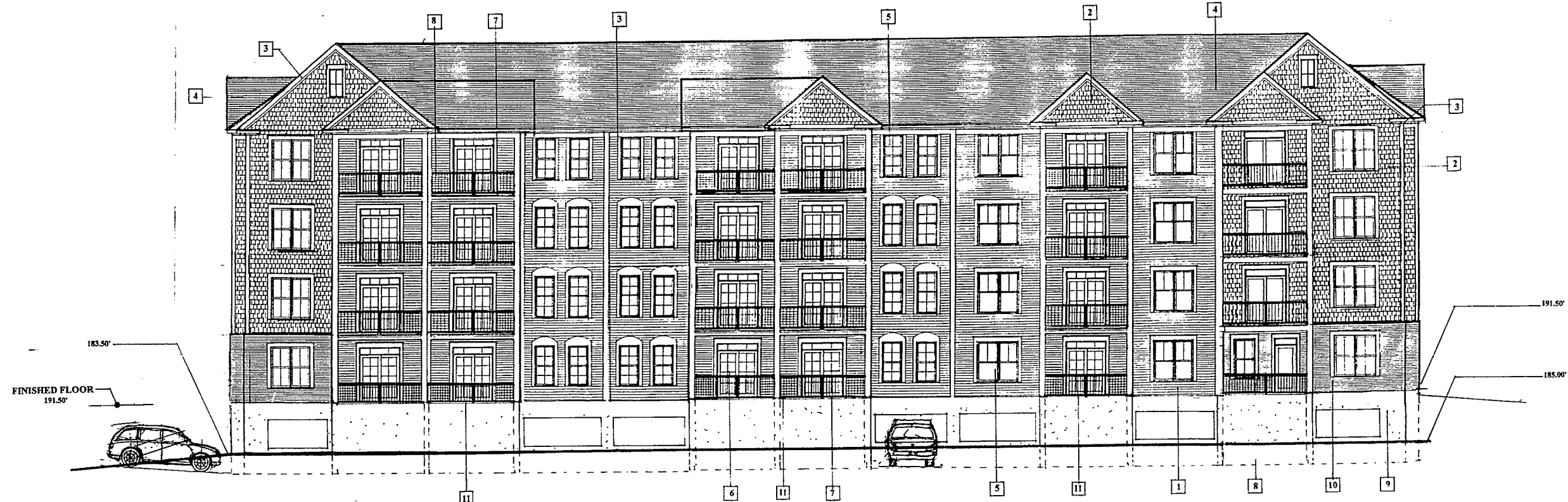
GARAGE ENTRY ELEVATION OF
BUILDING S & T
ON-GRADE ENTRY ELEVATION OF

MICHAEL DUGAN
ARCHITECT
33 GARDEN STREET
BURLINGTON, VT 05401
(802) 249-1111

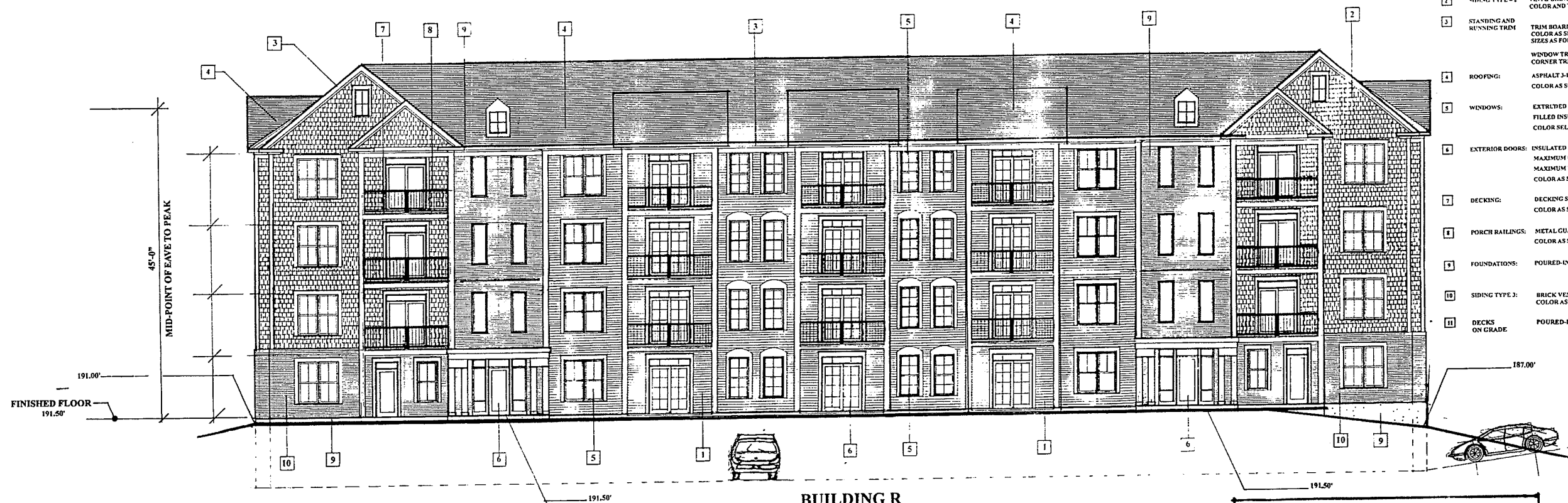
GARDEN STREET APARTMENTS
33 UNIT BUILDING OPEN-AIR GARAGE
BURLINGTON VERMONT
GARDEN STREET

MAY 16, 2015

A-5.



REAR ELEVATION
1/8" = 1'-0"



FRONT ELEVATION
1/8" = 1'-0"

BUILDING R

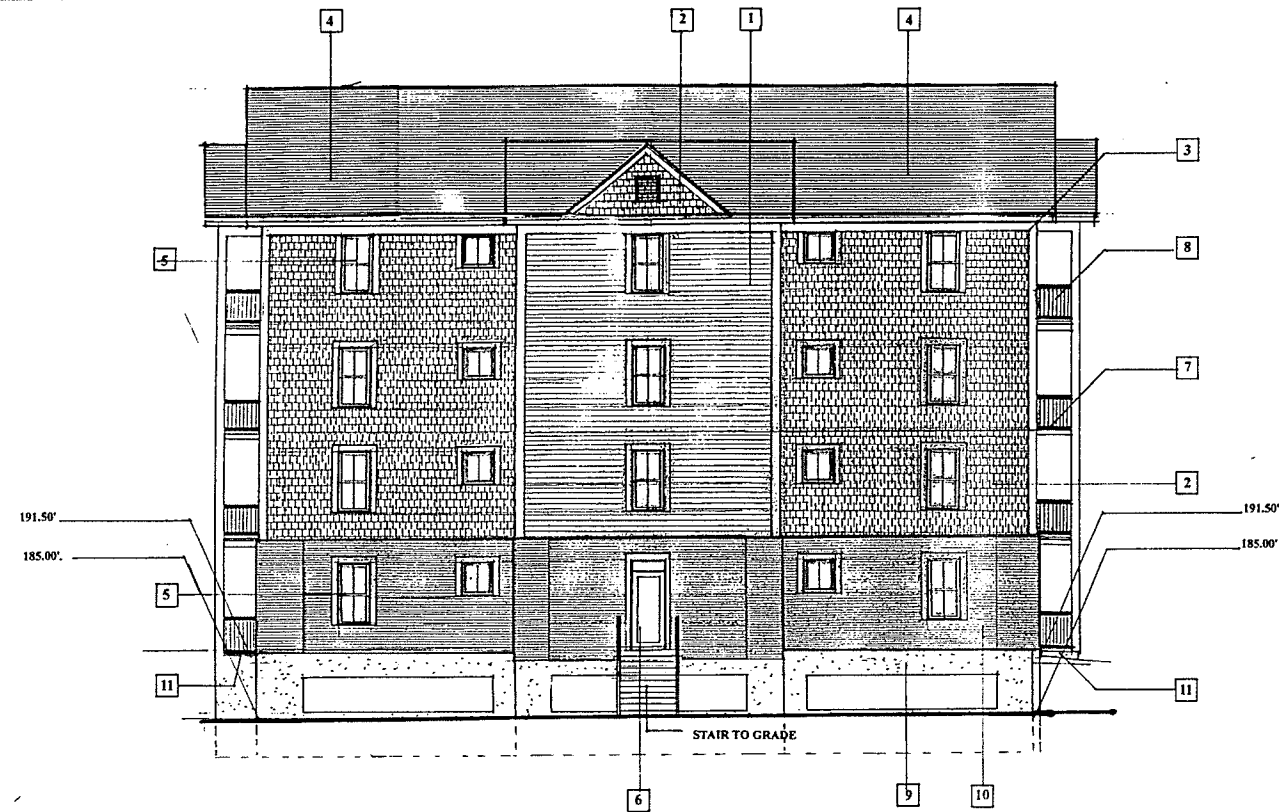
FFE= 191.50'

DESCRIPTION OF EXTERIOR MATERIALS

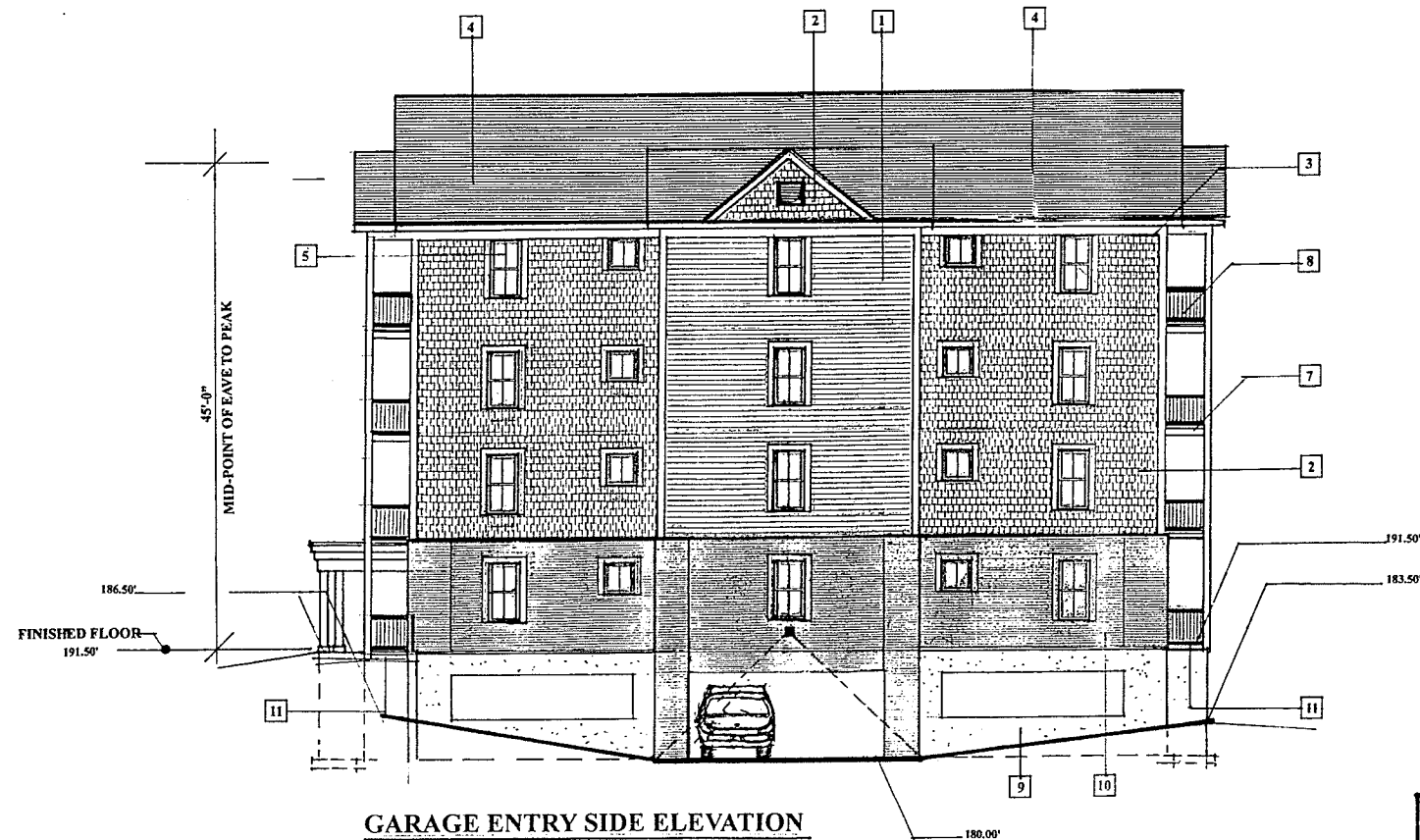
- | | | |
|----|---------------------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL "SHINGLE" SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8
DOOR TRIM: 1 X 4
FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (25 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.35 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3 | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |



NOTE: GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.



ON-GRADE ENTRY SIDE ELEVATION
1/8" = 1'-0"



GARAGE ENTRY SIDE ELEVATION
1/8" = 1'-0"

BUILDING R

FFE= 191.50'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL 'SHINGLE' SIDING WITH 6 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS - "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 4
DOOR TRIM: 1 X 4
FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |
| 11 | DECKS ON GRADE | POURED-IN-PLACE CONCRETE |

NOTE:
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GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

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ON-GRADE ENTRY ELEVATION OF BUILDING R

MICHAEL L. DUGAN ARCHITECT
700 W. 10TH STREET, SUITE 200
DES MOINES, IOWA 50319
PHONE: 515.281.1111
FAX: 515.281.1112
WWW.MLDARCHITECT.COM

GARDEN STREET APARTMENTS
44 UNIT BUILDING OPEN-AIR GARAGE
GARDEN STREET



FEBRUARY 16, 2024

A-6

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT
Catalog Number:

CAP-21-24NB-27-4K-T2-UNV-3RNW-BBT

Notes:

Type:**L1-2**

SLA14-27041


BEACON
design . performance . technology
www.beaconproducts.com

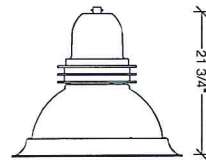
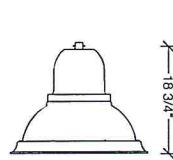
Type:
Project Name:
Notes:

RECEIVED
FEB 18 2015
rev. 03.14.2014
DEPARTMENT OF
PLANNING & ZONING
Urban LED Luminaires

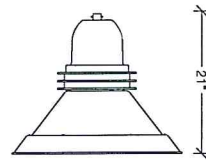
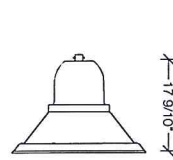
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

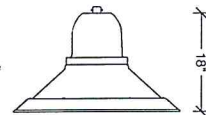
CAP - Round Shade


26" - CAP
Shown with optional 3RNW rings
EPA: 1.39 ft²
40 lbs

21" - CAP
EPA: 1.04 ft²
35 lbs

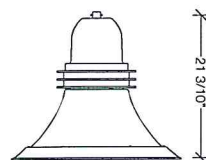
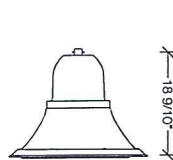
MRDS - Deep Shade


26" - MRDS
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MRDS
EPA: 1.00 ft²
35 lbs

MRSS - Shallow Shade


26" - MRSS
EPA: 1.17 ft²
40 lbs

MAR - Curved Shade


26" - MAR
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MAR
EPA: 1.00 ft²
35 lbs
A. MODEL

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array¹
60NB-136 136 Watts - LED array¹
3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings
3RNW three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:

Grove St Apartments - Burl VT

Catalog Number:

CAP-21-24NB-27-4K-T2-UNV-BRNW-BBT

Notes:



DEPARTMENT OF
PLANNING & ZONING
rev. 03/11
URBAN (LED)
Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/MK. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

Type:

SLA1-27041

FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

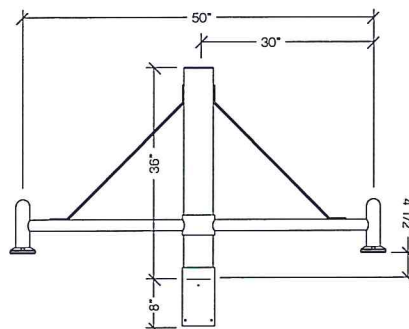
rev. 02.24.2014

AA-44 STRUT
Arms
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www.beaconproducts.com

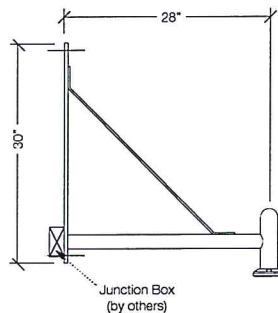
Type:
Project Name:
Notes:

Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

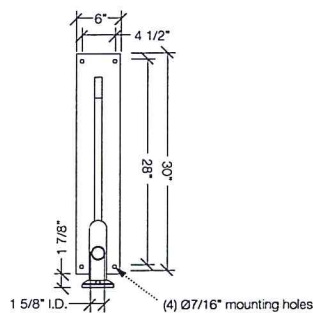
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a primer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	weight	12	-	-	-	-	-	-	-	-	-
	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT
Catalog Number:

CAP-21-24NB-27-4K-T3-UNV-3RNW-BBT

Notes:

Type:**L1-3**

SLA14-27041


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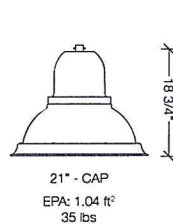
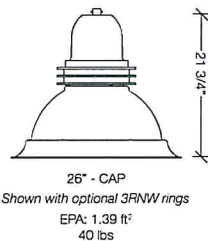
Type:
Project Name:
Notes:

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FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING
Urban LED luminaires

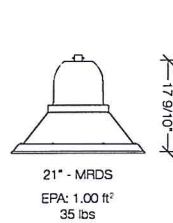
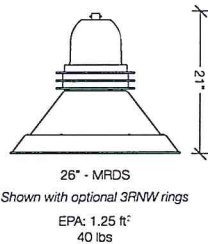
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

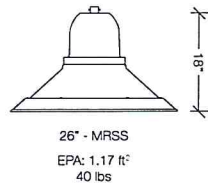
CAP - Round Shade



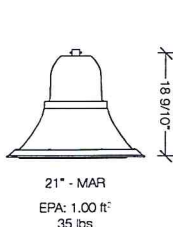
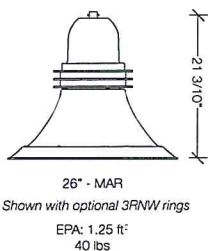
MRDS - Deep Shade



MRSS - Shallow Shade



MAR - Curved Shade

**A. MODEL**

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array¹
60NB-136 136 Watts - LED array¹
3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings
3RNW three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates		Catalog Number: CAP-21-24NB-27-4K-T3-UNV-3RNW-BBT	Type: L1-3
	Job Name: Grove St Appartments - Burl VT	Notes:	RECEIVED FEB 18 2015 rev. 03.14.2014 DEPARTMENT OF PLANNING & ZONING URBAN (LED) LUMINAIRES



Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/MK. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to -component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

Type:

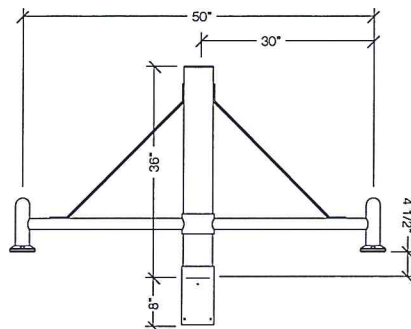
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DEPARTMENT OF PLANNING & ZONING
rev. 02.24.2014
AASHTO STRUT
Arms

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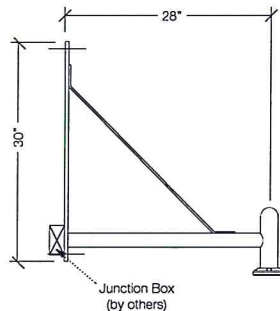
Type:
Project Name:
Notes:

Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

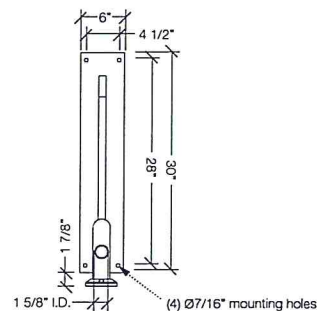
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	wall	weight	12	-	-	-	-	-	-	-	-
	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT
Catalog Number:CAP-21-24NB-27-4K-T4-UNV-3RNW-
BBT

Notes:

Type:**L1-4**

SLA 4-2704

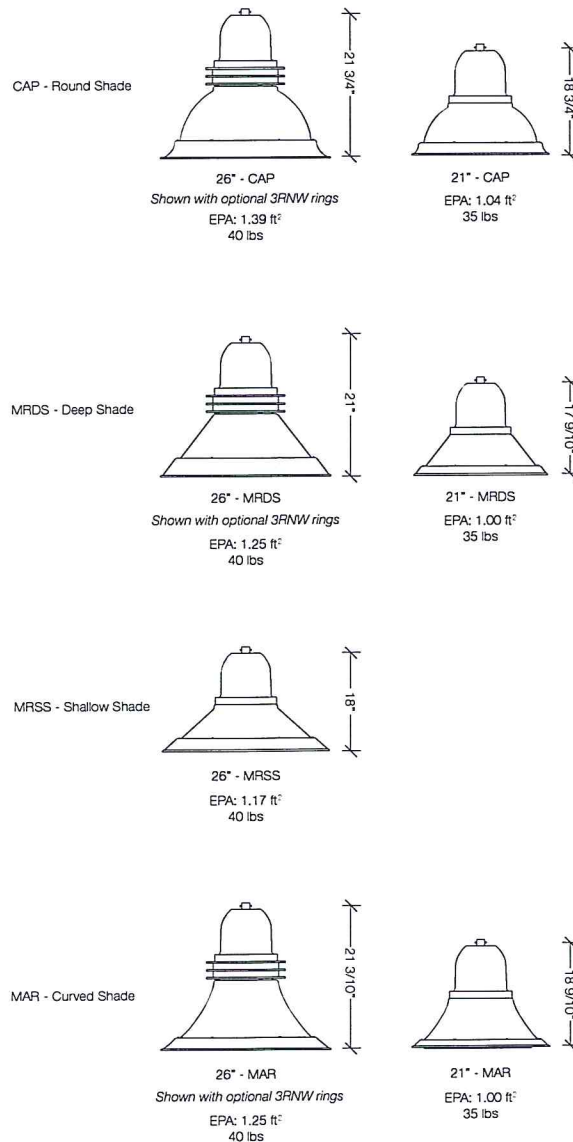

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www.beaconproducts.com

 Type:
Project Name:
Notes:

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FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING
rev. 03.14.2014
URBAN (LED)
Urban LED Luminaires

Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS**A. MODEL**

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

G. STYLE OPTIONS

NRNW no rings
3RNW three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array³
60NB-136 136 Watts - LED array³
 3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Appartments - Burl VT

Catalog Number:

CAP-21-24NB-27-4K-T4-UNV-3PINV

BBT

Notes:



Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to -component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP)
Lumen Output Multipliers

5000K = 1.0 min 67 CRI
4000K = .92 min 70 CRI
3000K = .75 min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates

**Job Name:**

Grove St Apartments - Burl VT

Catalog Number:

AA44-S-4-B-P-BBT

Notes:

Type:

SLA14-2014

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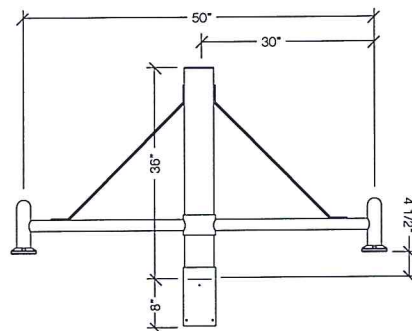
www.beaconproducts.com

Type:
Project Name:
Notes:

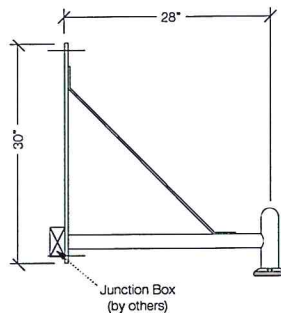
DEPARTMENT OF
PLANNING & ZONING

rev. 02.24.2014
AA-44 STRUT
Arms

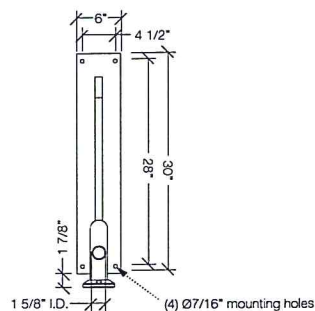
Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

DETAILS

WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL**AA-44** Strut**B. POST SHAFT PROFILE****W** wall mount**S** smooth**F** fluted**C. POST SHAFT DIAMETER****4** 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT**B** see arrangement table below**E. LUMINAIRE MOUNTING****P** pendant**F. COLOR****BBT** basic black textured**BMT** black matte textured**WHT** white textured**MBT** metallic bronze textured**BZT** bronze textured**DBT** dark bronze textured**GYS** gray smooth**DPS** dark platinum smooth**GNT** green textured**MST** metallic silver textured**MTT** metallic titanium textured**OWI** old world iron**RAL** _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	wall	weight	12	-	-	-	-	-	-	-	-
	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38
	EPA	-	3.06	4.00	4.00	3.41	4.43	4.43	4.43	4.90	4.90

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT
Catalog Number:CAP-21-24NB-55-4K-T3-UNV-3RNV
BBT

Notes:

Type:L2
SLA14-2204
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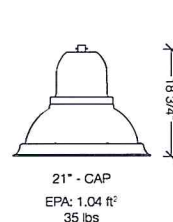
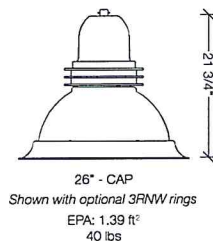
Type:
Project Name:
Notes:

FEB 18 2015
DEPARTMENT OF PLANNING & ZONING
rev. 03.14.2014
URBAN (LED)
Urban LED Luminaires

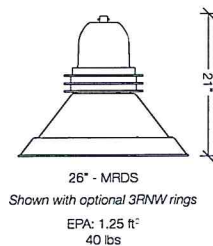
Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNV	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS

CAP - Round Shade



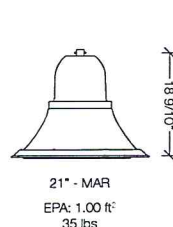
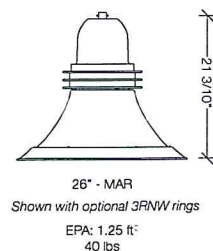
MRDS - Deep Shade



MRSS - Shallow Shade



MAR - Curved Shade

**A. MODEL**

CAP-21 21" Capitol
MRDS-21 21" Miramar deep shade
MAR-21 21" Maritas
CAP-26 26" Capitol
MRSS-26 26" Miramar shallow shade
MRDS-26 26" Miramar deep shade
MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array
24NB-55 55 Watts - LED array
36NB-80 80 Watts - LED array
48NB-110 110 Watts - LED array²
60NB-136 136 Watts - LED array²
3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K
4K 4000K
5K 5000K (std.)

D. OPTICS

T2 type II
T3 type III
T4 type IV
T5R type V, rectangular
T5QM type V, square medium
T5W type V, round wide

E. VOLTAGE

UNV 120-277V
347 347V
480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button
2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings
3RNV three cast rings

H. COLOR

BBT basic black textured
BMT black matte textured
WHT white textured
MBT metallic bronze textured
BZT bronze textured
DBT dark bronze textured
GYS gray smooth
DPS dark platinum smooth
GNT green textured
MST metallic silver textured
MTT metallic titanium textured
OWI old world iron
RAL _____

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates



Job Name:
Grove St Appartments - Burl VT

Catalog Number:

CAP-21-24NB-55-4K-T3-UNV-3RNW-BBT

Notes:

Type:

FEB 4 2015

SLA14-27041

DEPARTMENT OF
PLANNING & ZONING

rev. 03.14.2014

URBAN (LED)

Urban LED Luminaires



Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer. Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP)
Lumen Output
Multipliers

5000K = 1.0 min 67 CRI

4000K = .92 min 70 CRI

3000K = .75 min 80 CRI

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
AA44-S-4-B-P-BBT

Notes:

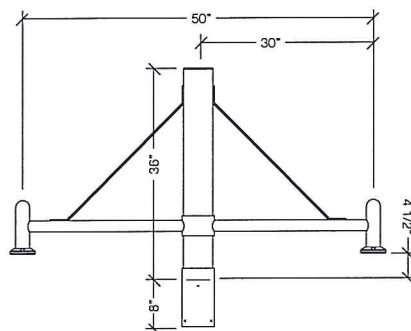
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DEPARTMENT OF
PLANNING & ZONING
rev. 02.24.2014
AA-44 STRUT
Arms


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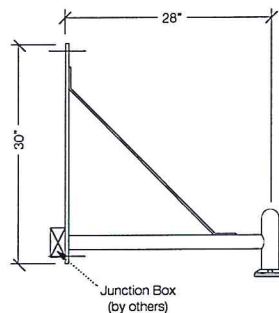
Type:
Project Name:
Notes:

Sample AA-44 S 4 B P BBT
Ordering / / / / /
A B C D E F

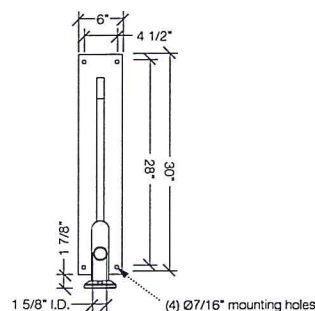
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER _____

D. ARRANGEMENT

B see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanning HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø	weight	12	-	-	-	-	-	-	-	-	-
	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
Ø4"	weight	-	15	20	22	20	25	27	25	30	32
	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
Ø5"	weight	-	18	23	25	23	28	30	28	33	35
	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
Ø6"	weight	-	21	26	28	26	31	33	31	36	38
	EPA	-	3.06	4.00	4.00	3.41	4.43	4.43	4.43	4.90	4.90

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
LC6LED120 / 6LCLED635K8

Notes:

RECEIVED
FEB 18 2015
SLA14-2015


6" LED Downlight

LC6LED
120 or 277V
0-10V Dimming Option

APPLICATIONS:

LiteFrame Commercial (LC6LED) is a 6" commercial grade LED downlight with available outputs between 1000-1600 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C (LED5), 28°C (LED6), 25°C (LED7). Free Air Flow around fixture is required for optimal life performance.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC6LED uses either 36, 54, 72 low power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SCDM color consistency. The use of multiple low power LED's allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LED's. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

The LC6LED utilizes a 25 watt constant current Thomas Research Products LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing sku's and simplified specification. The driver is UL8750 and Class II compliant.

DIMMING:

A 0-10V dimming option is available (DM), providing flicker-free dimming down to 10%. See list of compatible dimmers on page (3). For the sizing of the control circuit, the dimming circuit may require up to 1.2mA of sink current.

INSTALLATION:

Light commercial bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6). Wall wash orientation may be field adjusted in 90° increments to housing.

CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations (EM & WW damp location). ENERGY STAR qualified on standard downlight.

WARRANTY:

5 year warranty. See www.prescolite.com for details.

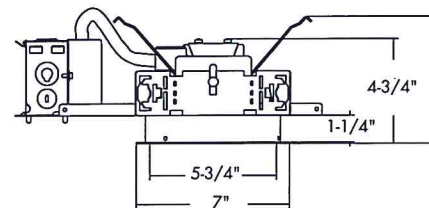
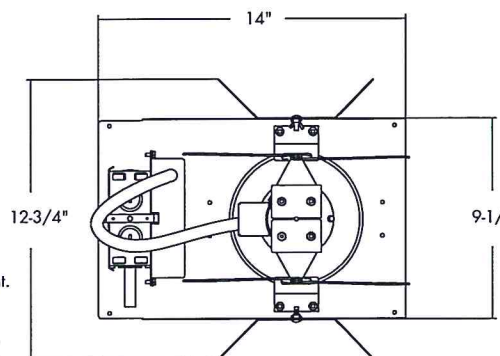
DEPARTMENT OF PLANNING & ZONING

FIRM NAME:

PROJECT:

LiteFrame


Ceiling Cutout: 6 1/2"
Maximum Ceiling Thickness 1 1/2"
For conversion to millimeter
multiply inches by 25.4
Not to Scale



6LCLED 5 & 6

*See page 5 for 6LCLED 7 line art
*See page 5 for 6LCLEDEM line art

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC6LED120DM - 6LCLED535K8WT

HOUSING	VOLTAGE	HOUSING OPTIONS	TRIM APERTURE	OUTPUT	KELVIN	CRI	REFLECTOR FINISH	REFLECTOR COLOR	REFLECTOR OPTIONS	ACCESSORIES
☐ LC6LED 6" LED Housing	☐ 120 120V ☐ 277 277V	☐ Blank No Dimming ☐ DM 0-10V dimming to 10% ☐ WIH Wi-Hubb Enabled ☐ EM³ Bodine BSL310C-DF Battery Pack with integral test switch and indicator light ☐ EMR Bodine BSL310C Battery Pack with remote test switch and indicator light	☐ 6LCLED 6" Open Reflector/ Light Engine Assembly	☐ 5 Nominal 1000 Delivered Lumens ☐ 6 Nominal 1400 Lumens Delivered ☐ 7 Nominal 1600 Lumens Delivered	☐ 27K 2700 Kelvin ☐ 30K 3000 Kelvin ☐ 35K 3500 Kelvin ☐ 40K 4000 Kelvin	☐ 8 80+ CRI	☐ Blank Clear Alzak, Semi- Diffuse	☐ WH¹ White Paint	☐ WT White Trim ☐ EM³ Pre-punched reflector to accept integral test switch ☐ WF Wide Flange ☐ WW^{5,6} Wall Wash	☐ B24 Set of two(2) 24" bar hangers for T-bar ceiling; ☐ B6 Set of two (2) bar hange ceiling joist up to 24" ce ☐ LG15^{2,4} Dual-Lite100VA Surface Mount LiteGear Emergen Lighting Inverter ☐ LG17^{2,4} Dual-Lite100VA Recessed Mount LiteGear Emergen Lighting Inverter ☐ LG17^{2,4} Dual-Lite100VA Recessed T-Grid LiteGear Emergen Lighting Inverter ☐ LG25^{2,4} Dual-Lite 250 VA Surface Mount LiteGear Emergen Lighting Inverter ☐ SCA6D Sloped ceiling adapter (s note on page 4)

¹ Requires WT option² See LC6LED and LiteGear Compatibility on page 3³ EM must be selected on both the housing and the trim, not compatible with WW trim⁴ Not compatible with EM or EMR⁵ Damp location only⁶ Not compatible with EM (EMR is compatible)

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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
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LFR-LED-01

Submitted by Swaney Lighting Associates

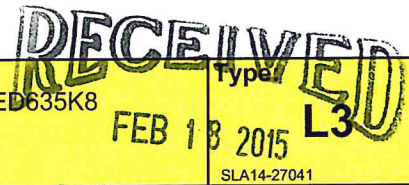
**Job Name:**

Grove St Apartments - Burl VT

Catalog Number:

LC6LED120 / 6LCLED635K8

Notes:



SLA14-27041

PHOTOMETRIC DATA**DEPARTMENT OF PLANNING & ZONING**
LiteFrame - 6" LC6LED Downlight

DRIVER DATA	6LCLED5xxx	6LCLED6xxx	6LCLED7xxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.143 (120v)	0.200 (120v)	0.148 (120v)
	0.062 (277v)	0.087 (277v)	0.108 (277v)
Input Power	17.1W	24.0W	29.8W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

Lumen Multiplier Table

Photometrics for the LC6LED are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

LC6LED120 6LCLED535K8

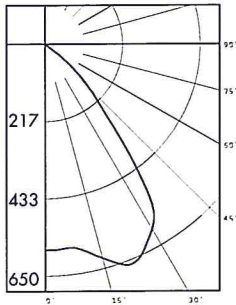
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.1W

Fixture Delivered Lumens: 925

Fixture Efficacy: 54.0

Spacing Criteria: 1.3

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	560
5	552
15	593
25	621
35	444
45	161
55	10
65	2
75	1
85	0
90	0

Test No. 1911.6074

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	920.4
0-90	925.1
90-180	0.0
0-180	925.1

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average - 0°
45°	12691
55°	873
65°	326
75°	164
85°	62

COEFFICIENTS OF UTILIZATION

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance													
	80%			70%			50%			30%			10%	
	20% Effective Floor Cavity Reflectance													
	% Wall Reflectance													
	70	50	30	10	70	50	30	10	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	98	97	96
2	106	101	96	93	104	99	95	92	96	93	90	88	87	86
3	100	93	87	83	98	91	86	82	89	84	81	80	78	76
4	94	86	79	75	92	84	79	74	82	77	73	70	68	66
5	88	79	72	68	87	78	72	67	76	71	67	65	63	61
6	83	73	66	62	82	72	66	61	71	65	61	60	58	56
7	78	68	61	56	77	67	61	56	66	60	56	55	53	51
8	74	63	56	52	72	62	56	51	61	55	51	50	48	46
9	69	59	52	47	68	58	52	47	57	51	47	46	44	42
10	66	55	48	44	64	54	48	44	53	47	43	42	40	38

LC6LED120 6LCLED535K8

LC6LED120 6LCLED635K8

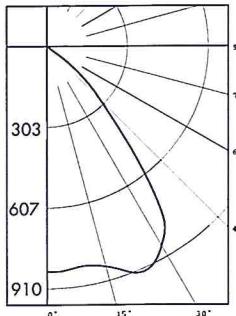
LED Light Engine: 3500K, 80+ CRI

System Wattage: 24.0W

Fixture Delivered Lumens: 1375

Fixture Efficacy: 57.3

Spacing Criteria: 1.3

**CANDELA DISTRIBUTION**

DEG	CANDELA
0	836
5	824
15	847
25	869
35	649
45	249
55	16
65	4
75	1
85	0
90	0

Test No. 1910.6073

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1369.3
0-90	1375.2
90-180	0.0
0-180	1375.2

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average - 0°
45°	19982
55°	1447
65°	541
75°	244
85°	89

COEFFICIENTS OF UTILIZATION

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance										
	80%		70%		50%		30%		10%		
	% Effective Floor Cavity Reflectance										
	% Wall Reflectance										
1	70	50	30	10	70	50	30	10	50	30	10
2	113	110	107	105	110	108	105	103	102	100	98
3	106	101	96	93	104	99	95	92	90	87	85
4	100	93	87	83	98	91	86	82	89	84	81
5	94	86	79	75	92	84	79	74	82	77	74
6	88	79	72	68	87	78	72	67	76	71	67
7	83	73	66	62	82	72	66	61	71	65	61
8	78	68	61	56	77	67	61	56	66	60	56
9	74	63	56	52	72	62	56	51	61	55	51
10	69	59	52	47	68	57	51	47	57	50	46
11	66	55	48	44	64	54	48	44	53	47	43

LC6LED120 6LCLED635K8



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Hubbell Lighting, Inc.

Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
LC6LED120 / 6LCLED635K8
Type:**L3**

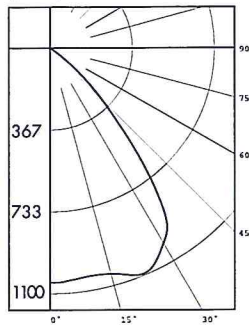
Notes:

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LightFrame - 6 LCLED Downlight
DEPARTMENT OF
PLANNING & ZONING

PHOTOMETRIC DATA

LC6LED120 6LCLED735K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 29.8W
Fixture Delivered Lumens: 1598
Fixture Efficacy: 53.6
Spacing Criteria: 1.3



Test No. 1912.6072

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1003
5	996
15	998
25	1020
35	822
45	314
55	25
65	5
75	2
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1590.1
0-90	1597.6
90-180	0
0-180	1597.6

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average - 0°
45°	22934
55°	1376
65°	538
75°	272
85°	75

COEFFICIENTS OF UTILIZATION

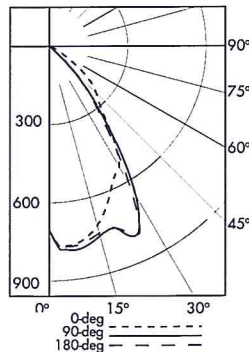
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	103	101	100	100	98	97	96	95	94			
2	106	101	96	93	104	99	95	91	96	92	89	85	80	88	90	88	85			
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71			
5	88	79	72	67	86	78	72	67	76	70	66	74	69	66	73	68	65			
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60			
7	78	67	61	56	76	67	60	56	65	59	55	64	59	55	63	58	55			
8	73	63	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50			
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46			
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43			

LCAL6D 20 GAlCED735K8

LC6LED120 6LCLED735K8

LC6LED120-6LCLED635K8 WW

LED Light Engine: 3500K, 80 CRI
System Wattage: 15.6W
Fixture Delivered Lumens: 1051
Fixture Efficacy: 67



Test No. 7829

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	0.0	90.0	180.0
0	706	706	706
5	768	783	772
15	712	753	743
25	574	797	798
35	422	435	384
45	254	121	119
55	121	3	4
65	33	1	2
75	2	1	1
85	0	0	0
90	0	0	0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	19685	9377	9222
55°	11561	287	382
65°	4279	130	259
75°	423	212	212
85°	0	0	0

					MULTIPLE UNITS	
					UNITS ON 3' CENTER	UNITS ON 4' CENTER

3' DISTANCE FIXTURE MOUNTED OUT FROM WALLS FOOTCANDLE DISTRIBUTION ON WALL SURFACE																
DISTANCE FROM CEILING IN FEET	1	2	1	1	1	1	4	4	4	4	4	3	3	4		
1	2	1	1	1	1	1	4	4	4	4	4	3	3	4		
2	9	7	3	1	1	1	12	10	12	11	11	6	11			
3	14	12	6	2	1	1	19	19	19	16	13	16				
4	13	11	7	4	2	1	21	21	21	16	15	16				
5	11	10	8	5	2	1	21	22	21	16	17	16				
6	8	8	7	5	3	1	20	20	20	15	16	15				
7	6	6	6	5	3	1	19	18	19	13	14	13				
8	5	5	5	4	3	1	17	17	17	13	13	13				
9	4	4	4	4	3	1	15	15	15	12	11	12				

LC6LED120-6LCLED635K8 WW

Test No. 7829



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Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
LC6LED120 / 6LCLED635K8

Notes:

Type:**L3**

SLA14-27041

PHOTOMETRIC DATA

LiteFrame - 6" LED Downlight
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DIMMING COMPATIBILITY TABLE

Control Manufacturer	Wallbox Dimmer	Power Booster Available
Douglas Lighting Controls	WPC 5721	
Entertainment Technology	Tap Glide TG400FAM120 (120V) Tap Glide Heatsink TGH1500fam120 (120V) Oasis DA2000FAMU (120/277V)	
Honeywell, Inc.	EL731A1019 and EL7315A1009	EL7305A1010
HUNT Dimming	Preset Slide: PS-010-IV-120V and PS-010-WH-120V Preset Slide: PS-010-3W-IV-120V and PS-010-3W-WH-120V Preset Slide: PS-010-IV-277V and PS-010-WH-277V Preset Slide: PS-010-3W-IV-277V and PS-010-3W-WH-277V Preset Slide, controls FD-010, PS-1FC-010-IV- and PS-1FC-010-3W-WH-120/277V Preset Slide, controls FD-010, PS-1FC-010-3W-IV- and PS-1FC-010-3W-WH-120/277V Remoted mounted unit: FD-010120V and FD-010-277V	
Lehigh Electric Products Co.	Solitaire	PBX
Leviton Lighting Controls Div.	Leviton Centura Fluorescent Control System IllumaTech™ IP7 Series	CN100 PE300
Lutron Electronics Co., Inc.	Visit www.lutron.com/advance for the latest control information and selection	
PDM Electrical products	WPC-5721	
Starfield Controls	TR61 with DALI Interface port	RT03 DALInet Router
The Watt Stopper, Inc.	LS-4 used with LCD-101 and LCD-103	

**DEPARTMENT OF
PLANNING & ZONING**
Central Inverters

For fixture full light output in back-up mode, Prescolite and Dual-lite have jointly tested the LiteFrame Commercial LED with the 100 (LG1) and 250 (LG2) VA LiteGear inverters. For more information on LiteGear go to http://www.dual-lite.com/resources/litegear_luminaire_loading_chart/

wiHUBB®

Fixture comes with a pre-installed In-Fixture Module (1 relay, 0-10V) compatible with the HBA wiHUBB system. Actual dimming requires the selection of 0-10V dimming ballast as well. Consult factory for compatibility with EM fixtures.



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Submitted by Swaney Lighting Associates



Job Name:
Grove St Apartments - Burl VT

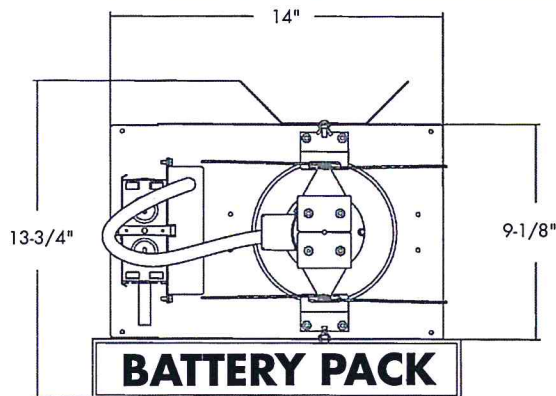
Catalog Number:
LC6LED120 / 6LCLED635K8

Notes:

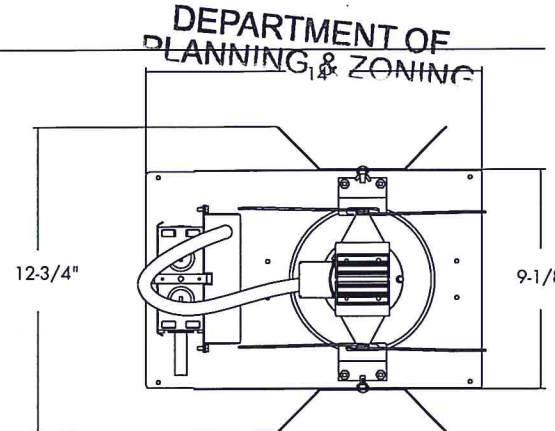
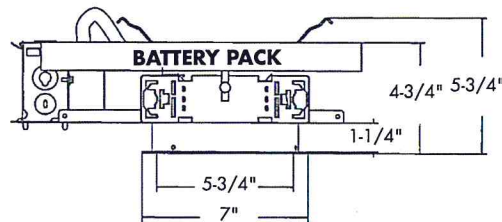
Type:

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L3
SLA# 27040

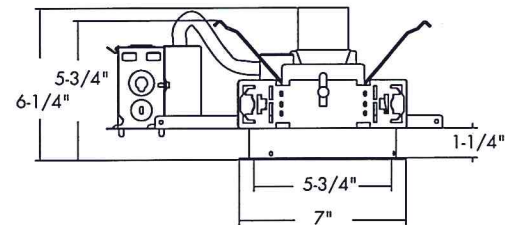
PHOTOMETRIC DATA



LC6LED EM



LC6LED 7



SCA6D

When ordering a sloped ceiling adapter, specify the degree of slope in 5° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.

lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	925
Watts	17.12
Lumens per Watt (Efficacy)	54

Color Accuracy	83
Color Rendering Index (CRI)	

Light Color (Correlated Color Temperature (CCT)) 3434 (Bright White)

2700K 3000K 4500K 6500K

Warm White Bright White Daylight

Visit www.lightingfacts.com for the Label Reference Guide

Registered Buyer: 7846-4873-12 (12/12/2013)
Manufacturer: 1704-02120-1633-ED131915
Type: Preset Floodlight

lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	1375
Watts	23.98
Lumens per Watt (Efficacy)	57

Color Accuracy	83
Color Rendering Index (CRI)	

Light Color (Correlated Color Temperature (CCT)) 3423 (Bright White)

2700K 3000K 4500K 6500K

Warm White Bright White Daylight

Visit www.lightingfacts.com for the Label Reference Guide

Registered Buyer: 7846-52884-12 (12/12/2013)
Manufacturer: 1704-02120-1633-ED131915
Type: Preset Floodlight

lighting facts
A Program of the U.S. DOE

Light Output (Lumens)	1598
Watts	29.79
Lumens per Watt (Efficacy)	53

Color Accuracy	83
Color Rendering Index (CRI)	

Light Color (Correlated Color Temperature (CCT)) 3418 (Bright White)

2700K 3000K 4500K 6500K

Warm White Bright White Daylight

Visit www.lightingfacts.com for the Label Reference Guide

Registered Buyer: 7846-52884-12 (12/12/2013)
Manufacturer: 1704-02120-1633-ED131915
Type: Preset Floodlight



Web: www.prescolite.com • Tech Support: (888) 777-4832
701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000
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DEPARTMENT OF PLANNING & ZONING
L5
A14-27041

Submitted by Swaney Lighting Associates



Job Name:
Grove St Appartments - Burl VT

Catalog Number:

TRP30L-4K-035-4-U-BL-SCP

Notes:

TRP
LED
ARCHITECTURAL WALLPACK

NEW

Cat.#

Job

Type



SPAUDLING
LIGHTING

Approvals

SPECIFICATIONS

Applications:

- Architectural wallpack in stylish Trapezoid shape with molded contours to accentuate building architecture. Provides excellent illumination in energy-saving LED systems.

Construction:

- Die-cast aluminum housing and door
- Seven powder coat standard finishes, plus custom color options

LED:

- 30 high power LEDs deliver up to 5,062 lumens
- Up to 105 lumens per watt
- Variety of IES distribution patterns - Type II, III, and IV (Forward Throw)
- 3000K - 80 CRI, 4000K - 70 CRI, and 5000K - 67 CRI, CCT nominal

Electrical:

- Two driver options: 34w at 350mA (1 driver) and 53w at 525mA (1 driver)
- Operating temperature: -30°C/-22°F to 40°C/104°F

Electrical (Cont.):

- 120-277VAC, 50/60Hz
- Power factor $\geq 90\%$
- THD (Total Harmonic Distortion) $<20\%$
- 10 KA, 10 KV, 270 joules surge suppressor

Controls:

Drivers are 0-10V dimming standard. Photocell and occupancy sensors available for complete on/off and dimming control.

Listings:

- UL1598 listed for use in wet locations
- 4K and 5K models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>
- Zero uplight (UO), dark sky, neighbor friendly
- Drivers IP66 and RoHS compliant

TRP-BBU Egress Wallpack:

Designed to meet strict 1fc minimum requirements. At 12ft mounting height 1fc covers 16x16ft area, well beyond the 10x10ft standard; No uplight, external test button; 120V or 277V only; Rated -20°C to 35°C

Warranty:

For more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>

PRODUCT IMAGE(S)



TRP



TRP with Motion Sensor



TRP with BBU

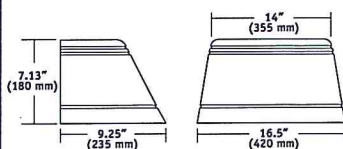
SHIPPING INFORMATION

Catalog Number	G.W.(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
TRP	16 (7.3)	18.5 (47)	9.5 (24)	11.5 (29)

CERTIFICATIONS/LISTINGS



DIMENSIONS



TRP
Weight: 13.2 lbs 5.9

ORDERING INFORMATION

ORDERING EXAMPLE: TRP-30L5K-053-2-U-DB

FAMILY	# OF LEDS	CCT	DRIVE CURRENT	DISTRIBUTION	VOLTAGE	FINISH	CONTROL OPTIONS	OPTIONS
TRP Trapezoid	30L 30 High brightness LEDs	3K ¹ 3000K 4K 4000K 5K 5000K	035 ² 350mA 053 525mA	2 Type II 3 ⁶ Type III 4 Type IV	U 120V-277V 1 ^{1A} 120V 2 ¹ 208V 3 ¹ 240V 4 ^{1A} 277V	CC ³ Custom Color BL Black DB Bronze FG Forest Green GR Gray PS Platinum RD Red WH White	PC ¹ Photocell (Must specify individual voltage) SC0 ^{2,5} Motion sensor On/Off control, No light output when no motion detected SCP ^{2,5} Programmable motion control, factory default is 10% light output	BBU ^{1A} Integral battery 120 or 277V only rated -20°C to 35°C (Must specify individual voltage) F ¹ Fusing (Must specify individual voltage)

¹ Must specify individual voltage for BBU, PC and Fusing options

² Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

³ Consult factory for Custom Color option

⁴ DLC qualification 4K and 5K models only

⁵ PC option not applicable, included in sensor. For SCP, PC function turns on to lower setting until motion is detected

⁶ BBU only available in TRP, 350mA, Type III, 120V or 277V

Controls Guide

ACCESSORIES - Order separately

Catalog Number	Description
SCP-REMOTE ²	Remote control for SCP option. Order at least one per project to program and control.



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Submitted by Swaney Lighting Associates


Job Name:
Grove St Apartments - Burl VT

Catalog Number:
TRP30L-4K-035-4-U-BL-SCP

Notes:

Type:**L5**

SLA14-27041

PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 67 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
				LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G
30	350mA	34w	2	3549	104	1	0	2	3161	93	1	0	1	2404	71	1	0	1
			3	3583	105	1	0	2	3191	94	1	0	1	2443	72	1	0	1
			4	3459	102	1	0	2	3081	91	1	0	1	2375	70	1	0	1
			2	4935	93	1	0	2	4466	84	1	0	2	3420	65	1	0	1
	525mA	53w	3	5062	96	1	0	2	4508	85	1	0	2	3452	65	1	0	2
			4	4887	92	1	0	2	4353	82	1	0	2	3352	63	1	0	2

Lumen values are from photometric tests performed at a NVLAP certified laboratory in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment, application and performance tolerances of the electrical components.

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
30	1	350mA	120	34	0.29
			277	34	0.12
		525mA	120	53	0.45
			277	53	0.18

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0° C	1.02
10° C	1.01
20° C	1.00
25° C	1.00
30° C	1.00
40° C	0.99
50° C	0.98

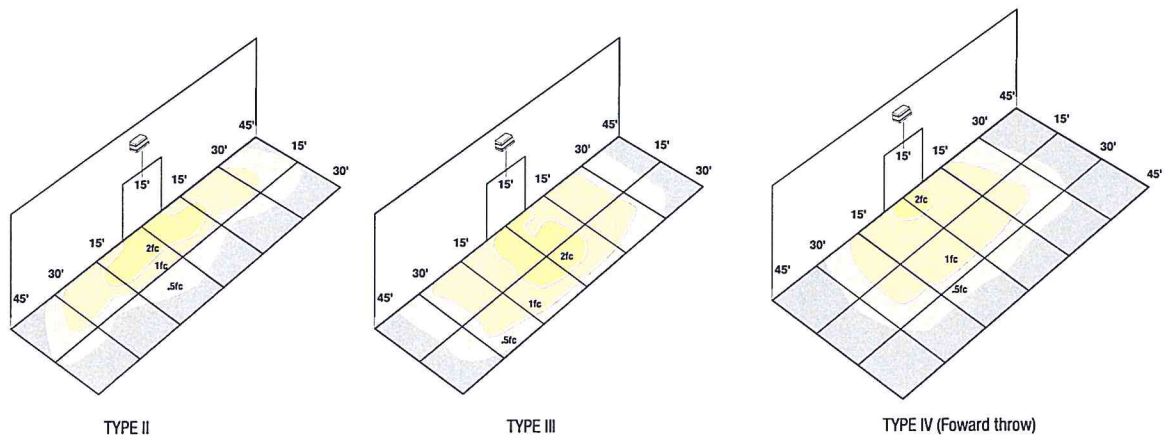
Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	TM-21-11 ¹ 60,000	100,000	
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>774,000
40°C / 104°F	0.99	0.96	0.95	0.95	0.93	>625,000

¹ Nichia 219B, 700mA, 85°C Ts, 10,000hrs

Data references the extrapolated performance projections for the TRP base model in 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

PHOTOMETRIC REPORTS

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TRP-SPEC 9/14

Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
2-CAP-21-24NB-27-4K-T4-UNV-
3RNW-BBT
Notes:

Type:

2L1-4

SLA14-27041


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www.beaconproducts.com

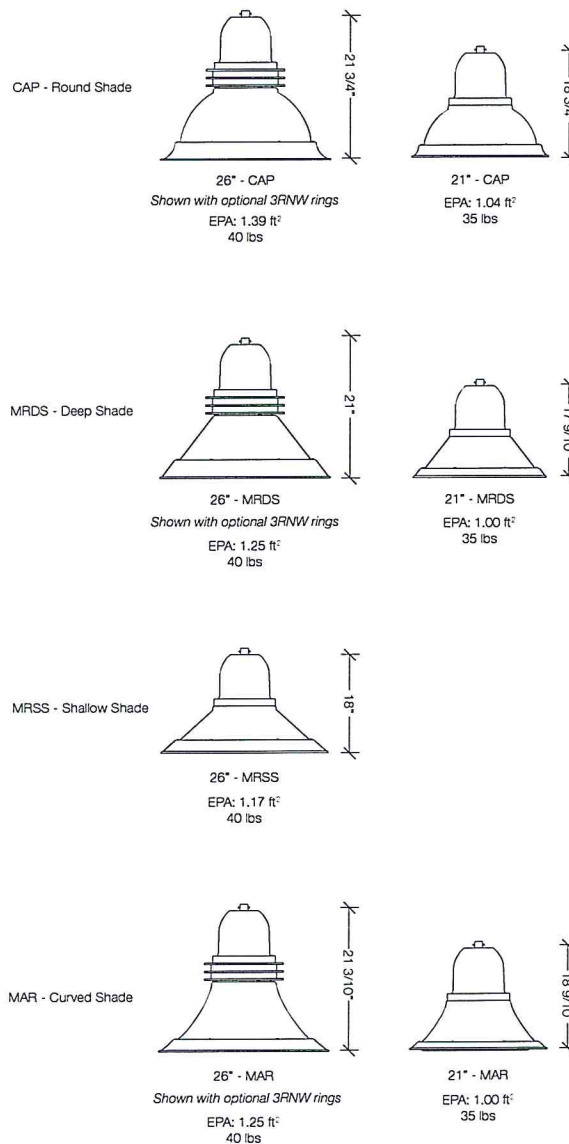
Type:
Project Name:
Notes:

DEPARTMENT OF
PLANNING & ZONING

rev. 03.14.2014
URBAN (LED)
Urban LED Luminaires

Sample	CAP-21	36NB-80	4K	T2	UNV	PEC	3RNW	BBT
Ordering	/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H

DETAILS



A. MODEL

CAP-21 21" Capitol (2 Fixtures)

MRDS-21 21" Miramar deep shade

MAR-21 21" Maritas

CAP-26 26" Capitol

MRSS-26 26" Miramar shallow shade

MRDS-26 26" Miramar deep shade

MAR-26 26" Maritas

B. ENGINE-WATTS

24NB-27 27 Watts - LED array

24NB-55 55 Watts - LED array

36NB-80 80 Watts - LED array

48NB-110 110 Watts - LED array¹60NB-136 136 Watts - LED array¹

3 = 26" Urban only

C. CCT - COLOR TEMP

3K 3000K

4K 4000K

5K 5000K (std.)

D. OPTICS

T2 type II

T3 type III

T4 type IV

T5R type V, rectangular

T5QM type V, square medium

T5W type V, round wide

E. VOLTAGE

UNV 120-277V

347 347V

480 480V

F. ELECTRICAL OPTIONS

PEC photocell, button

2PF dual power feed ^{1,2}

G. STYLE OPTIONS

NRNW no rings

3RNW three cast rings

H. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL

¹ not available on 24NB-27

Submitted by Swaney Lighting Associates		Catalog Number: 2-CAP-21-24NB-27-4K-T4-UNV-3RNW-BBT	Type: 2L1-4
	Job Name: Grove St Appartments - Burl VT	Notes:	

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rev. 03.14.2014
DEPARTMENT OF PLANNING & ZONING
URBAN (LED)
Urban LED Luminaires

Housing & LED Thermal Management: The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray. The lower shade shall be made from a one-piece aluminum spinning. The LED bezel assembly shall be attached to a one piece aluminum heat sink to provide direct-heat exchange between the LED light engine and the cool outdoor air. The Housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Bezel optical system: Each Beacon luminaire is supplied with an Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. A two-piece die cut silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.

The optical cartridge is secured to the aluminum heat sink with fasteners to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assembly is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using TIR designed Acrylic optical lenses over each LED.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062" thick aluminum base layer "high temperature" HT-06503 or equivalent (subject to change) dielectric (0.003" thick, thermal conductivity of 2.2 W/MK, UL RTI of 140°C) 0.0014" thick copper circuit layer Circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board shall be supplied with QPAD-3 fiberglass reinforced thermal pad 0.005" thick thermal conductivity of 2.0 W/Mk. Continuous use temperature of 180°C UL94 V-0. Board will be mounted to the heat sink using 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F).

The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure.

Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Electrical: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 40°C ambient conditions per MIL-217F Notice 2. Optional 0 to 10 volt dimming drivers are available upon request. All driver components supplied are Component-to -component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V

and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Power/Lumens & Distributions

Engine	Wattage	Delivered Lumens (varies by optic)	Delivered LPW	TM21 Calculated % Lumen Maint. at 100,000 hrs
24NB	27	2752-3014	105-115	96.19%
24NB	55	5138-5500	93-100	96.19%
36NB	80	6935-8215	93-103	94.87%
48NB	110	10240-10950	93-103	92.73%
60NB	136	12800-13700	93-103	85.79%

TM21 is the framework for taking LM-80 data and making useful LED lifetime projections. Reported and Calculated Lifetimes shown are based on hours at the time of this printing. For current Reported and Calculated hours please contact factory or Beacon's web-site.

CCT (COLOR TEMP) Lumen Output Multipliers	CRI (Color Rendering)
5000K = 1.0	min 67 CRI
4000K = .92	min 70 CRI
3000K = .75	min 80 CRI

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Submitted by Swaney Lighting Associates


Job Name:
Grove St Appartments - Burl VT

Catalog Number:
AA44-S-4-C-P-BBT

Notes:

Type:

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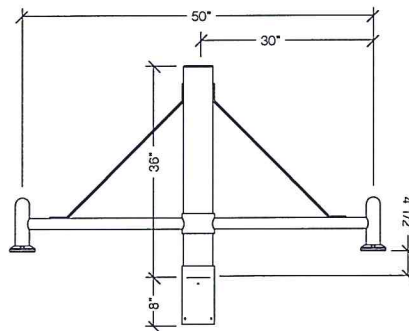
 AA-44 STRUT
Arms

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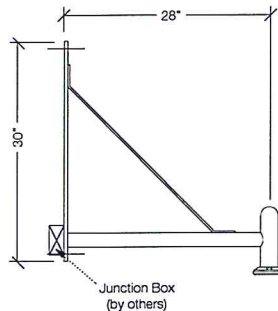
 Type:
Project Name:
Notes:

 Sample AA-44 S 4 B P BBT
Ordering / / / / /
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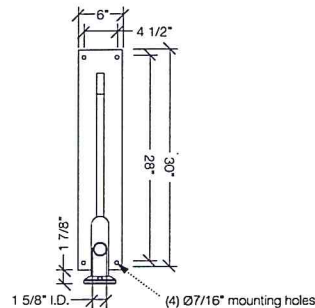
DETAILS



WALL BRACKET DETAILS



WALL PLATE DETAILS



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A. MODEL

AA-44 Strut

B. POST SHAFT PROFILE

W wall mount

S smooth

F fluted

C. POST SHAFT DIAMETER

4 4"

5 5"

6 6"

OTHER

D. ARRANGEMENT

C see arrangement table below

E. LUMINAIRE MOUNTING

P pendant

F. COLOR

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL

Construction: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

EPA (effective projected area): EPA is de-fined as (projected surface area X drag factor) and measured in ft². Allowable post, luminaire arm, luminaire and accessory EPAs are derived from the most current published AASHTO (American Association of State Highway and Transportation Officials) standard, currently AASHTO 2001 (50yr design life). Customer assumes all responsibility for selecting the appropriate post for installation (consult factory for assistance). Luminaire arm, luminaire and accessory EPA must be equal to or less than allowable EPA of post. Consult a professional engineer for compliance with local codes and standards.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Limited Warranty: Beacon Products warrants its products, to the original purchaser, against defects in materials and workmanship for proper usage for a period of 5 years after date of production, when properly installed, maintained and appropriately specified. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

		arrangement (EPA index ft ² / weight (lbs))									
		A	B	C	D	E	F	G	H	I	J
shaft Ø											
wall	weight	12	-	-	-	-	-	-	-	-	-
Ø4"	EPA	-	2.34	3.28	3.28	2.73	3.75	3.75	3.75	4.22	4.22
	weight	-	15	20	22	20	25	27	25	30	32
Ø5"	EPA	-	2.67	3.61	3.61	3.06	4.08	4.08	4.08	4.55	4.55
	weight	-	18	23	25	23	28	30	28	33	35
Ø6"	EPA	-	2.82	3.76	3.76	3.21	4.23	4.23	4.23	4.70	4.70
	weight	-	21	26	28	26	31	33	31	36	38

Luminaire Schedule				
Symbol	Tag	Qty	LLF	Description
	L3	4	0.900	LC6LED120 – 6LCLED635K8
	L1-3	30	0.820	CAP-21-24NB-27-4K-T3
	L1-4	34	0.820	CAP-21-24NB-27-4K-T4
	L1-2	2	0.820	CAP21-24NB-27-T2
	L2	5	0.820	CAP-21-24NB-55-4K-T3
	L5	13	0.900	TRP-30L4K-035-4
	2L1-4	1	0.820	twin - CAP-21-24NB-27-4K-T4

Calculation Summary					
Label	Units	Avg	Max	Min	Max/Min
Bldg I entry	Fc	1.20	1.6	0.2	8.00
Bldg J and K en	Fc	1.01	2.5	0.2	12.50
Bldg R entry	Fc	1.24	2.4	0.6	4.00
Bldg S entry	Fc	1.16	1.8	0.6	3.00
Bldg T entry	Fc	1.26	2.5	0.7	3.57
Entrance Drive	Fc	0.37	0.9	0.1	9.00
large parking	Fc	0.80	1.7	0.1	17.00
main rd walk	Fc	0.53	1.4	0.1	14.00
North Parking a	Fc	0.65	4.0	0.0	N.A.
North Pavilion	Fc	1.45	6.7	0.0	N.A.
Seasonal Act Wa	Fc	0.63	1.3	0.1	13.00
Small parking	Fc	0.59	1.2	0.1	12.00
South drive T-S	Fc	1.22	3.3	0.5	6.60
South Parking a	Fc	0.67	3.3	0.0	N.A.
South Pavilion	Fc	1.49	7.1	0.0	N.A.



Beacon Urban - Type L1 and L2



Spaulding TRP - Wall mtd 12' AFG





SWANEY LIGHTING ASSOCIATES

15 Pleasant Hill
P.O. Box 1597
Scarborough, ME
email: swaneylighting.com
ph: 207-883-7100
fax: 207-885-9600

#	Date	Comments
3	9/9/14	Pole locations
4	9/24/14	Added Bollards
5	9/29/14	Revised Site & Wall Packs

Drawn By: Steve Weatherbie

Not to Scale

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Garden Street Apartments
Burlington, VT



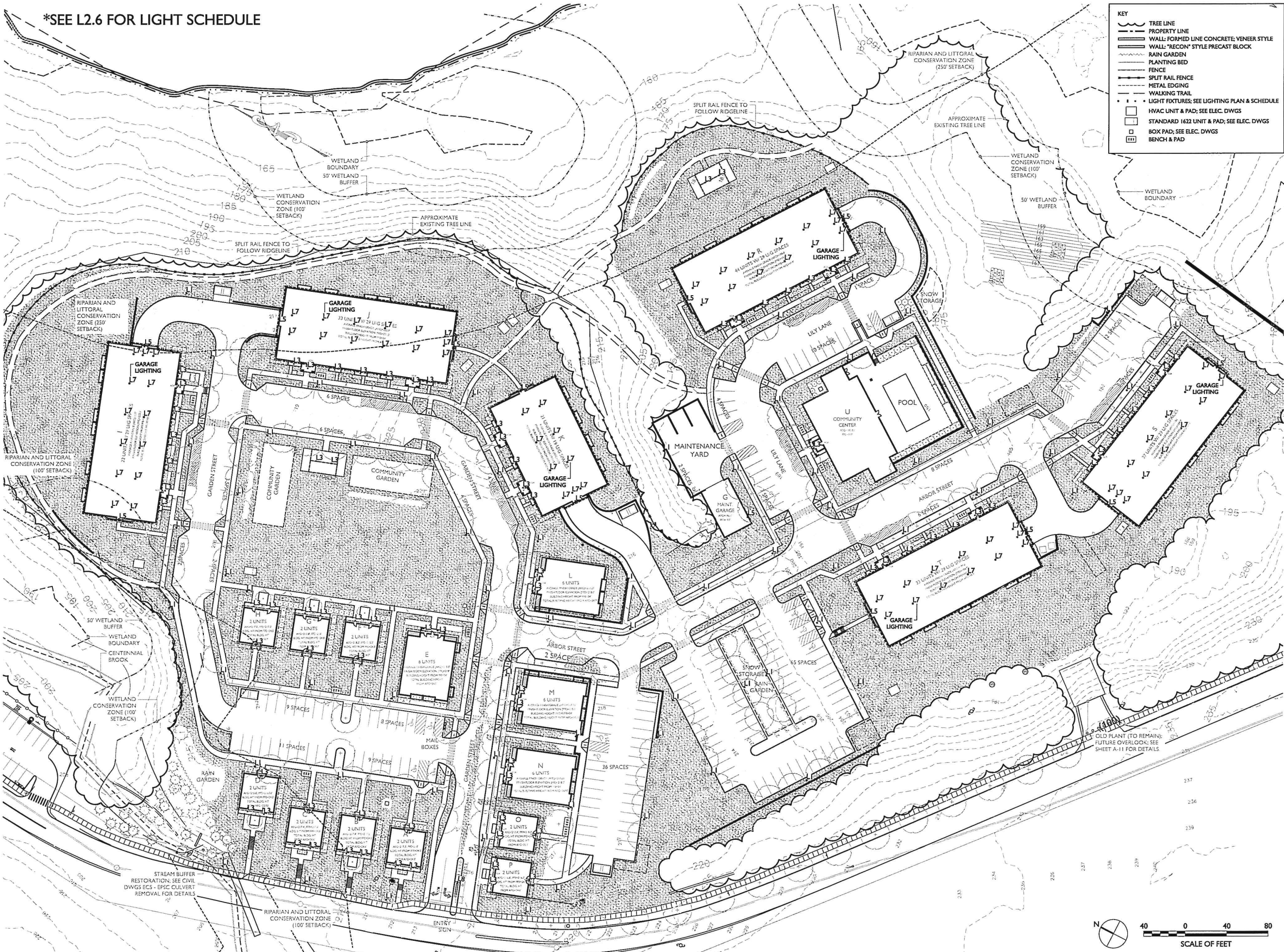
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**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**OVERALL
LANDSCAPE SITE
PLAN**

REVISIONS

*SEE L2.6 FOR LIGHT SCHEDULE



KEY

- TREE LINE
- PROPERTY LINE
- WALL: FORMED LINE CONCRETE; VENEER STYLE
- WALL: "RECON" STYLE PRECAST BLOCK
- RAIN GARDEN
- PLANTING BED
- FENCE
- SPLIT RAIL FENCE
- METAL EDGING
- WALKING TRAIL
- LIGHT FIXTURES; SEE LIGHTING PLAN & SCHEDULE
- HVAC UNIT & PAD; SEE ELEC. DWGS
- STANDARD 1622 UNIT & PAD; SEE ELEC. DWGS
- BOX PAD; SEE ELEC. DWGS
- BENCH & PAD

DRAFT
NOT FOR
CONSTRUCTION

**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**LANDSCAPE
LIGHTING PLAN**

REVISIONS



KEY

- TREE LINE
- PROPERTY LINE
- WALL: FORMED LINE CONCRETE, VENEER STYLE
- WALL: "REGON" STYLE PRECAST BLOCK
- RAIN GARDEN
- PLANTING BED
- FENCE
- SPLIT RAIL FENCE
- METAL EDGING
- WALKING TRAIL
- LIGHT FIXTURES; SEE LIGHTING PLAN & SCHEDULE
- HVAC UNIT & PAD; SEE ELEC. DWGS
- STANDARD 1622 UNIT & PAD; SEE ELEC. DWGS
- BOX PAD; SEE ELEC. DWGS
- BENCH & PAD

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CONSTRUCTION

**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**OVERALL
GRADING PLAN**

REVISIONS

© W&H ALL RIGHTS RESERVED 2012 DRAWING NO.

JOB NO. 244

SCALE 1" = 40'

DATE 02.03.15

LI.2

VERNAL EQUINOX - MARCH 20, 2014	
LONGITUDE: -73.22 / LATITUDE: 44.48	
Time	1200 Noon
GMT Time Zone	-5:00
Day Light Savings	Yes
Zero Azimuth	South
Sun Altitude Angle	43.53
Sun Azimuth Angle	-21.03
Tangent	0.949960179
Object Height in Feet	Shadow Length
10	10.53
12	12.63
14	14.74
16	16.84
18	18.95
20	21.05
25	26.32
30	31.58
35	36.84
40	42.11
45	47.37
50	52.63
55	57.90
60	63.16
65	68.42
70	73.69
SIZE: 35" tall, 25" wide (approx. 10 years old)	



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**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**PARKING LOT
SHADE STUDY**

REVISIONS

*SEE L2.6 FOR TREE SCHEDULE



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**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

TREE PLAN

REVISIONS

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JOB NO. 244

SCALE 1" = 40'

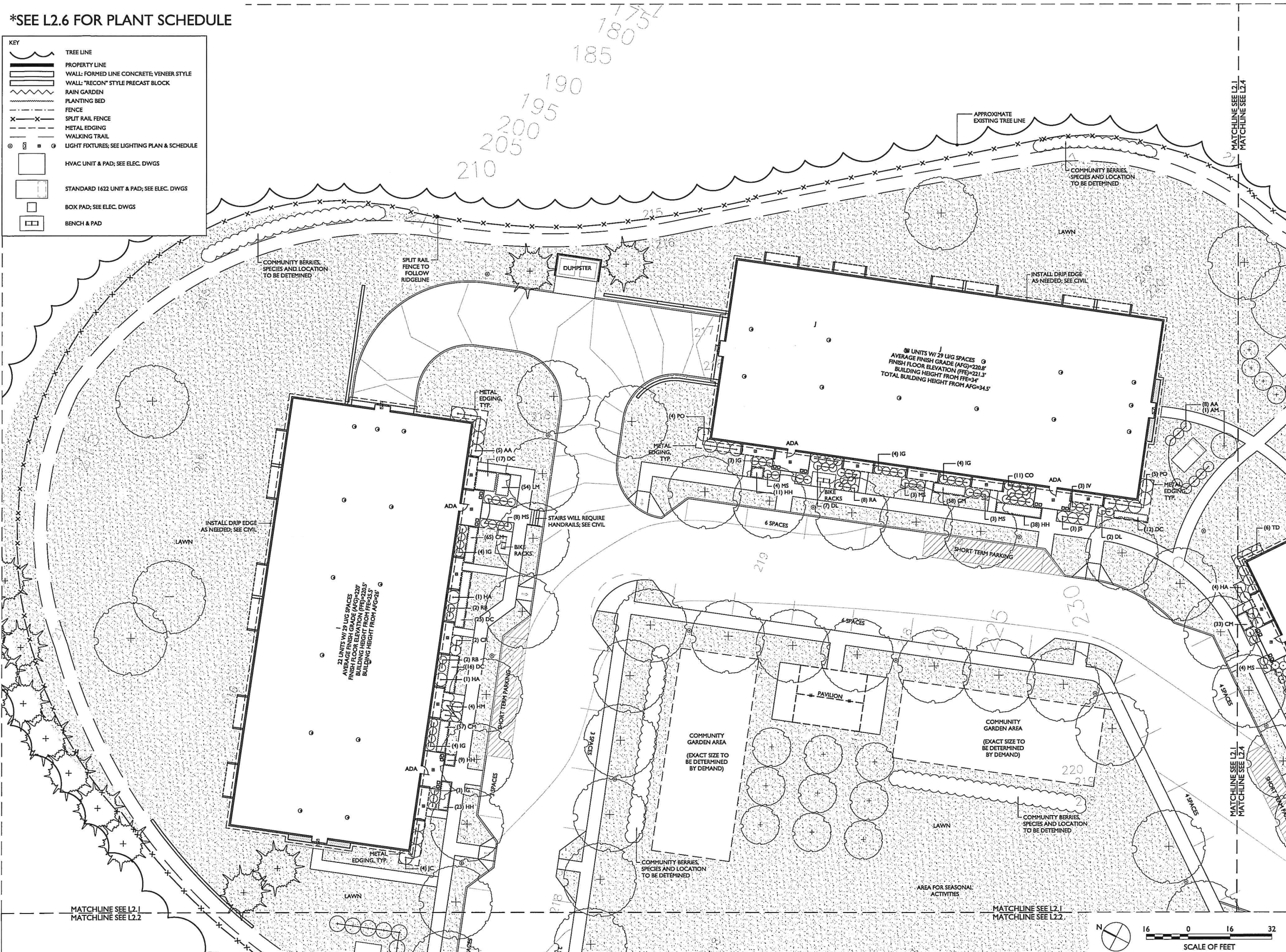
DATE 02.03.15

L2.0

*SEE L2.6 FOR PLANT SCHEDULE

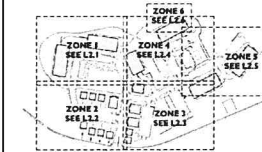
KEY

- TREE LINE
- PROPERTY LINE
- WALL: FORMED LINE CONCRETE, VENEER STYLE
- WALL: "RECON" STYLE PRECAST BLOCK
- RAIN GARDEN
- PLANTING BED
- FENCE
- SPLIT RAIL FENCE
- METAL EDGING
- WALKING TRAIL
- LIGHT FIXTURES; SEE LIGHTING PLAN & SCHEDULE
- HVAC UNIT & PAD; SEE ELEC. DWGS
- STANDARD 1622 UNIT & PAD; SEE ELEC. DWGS
- BOX PAD; SEE ELEC. DWGS
- BENCH & PAD



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ZONE KEY: NOT TO SCALE

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**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**ENLARGED
PLANTING PLAN
ZONE I**

REVISIONS

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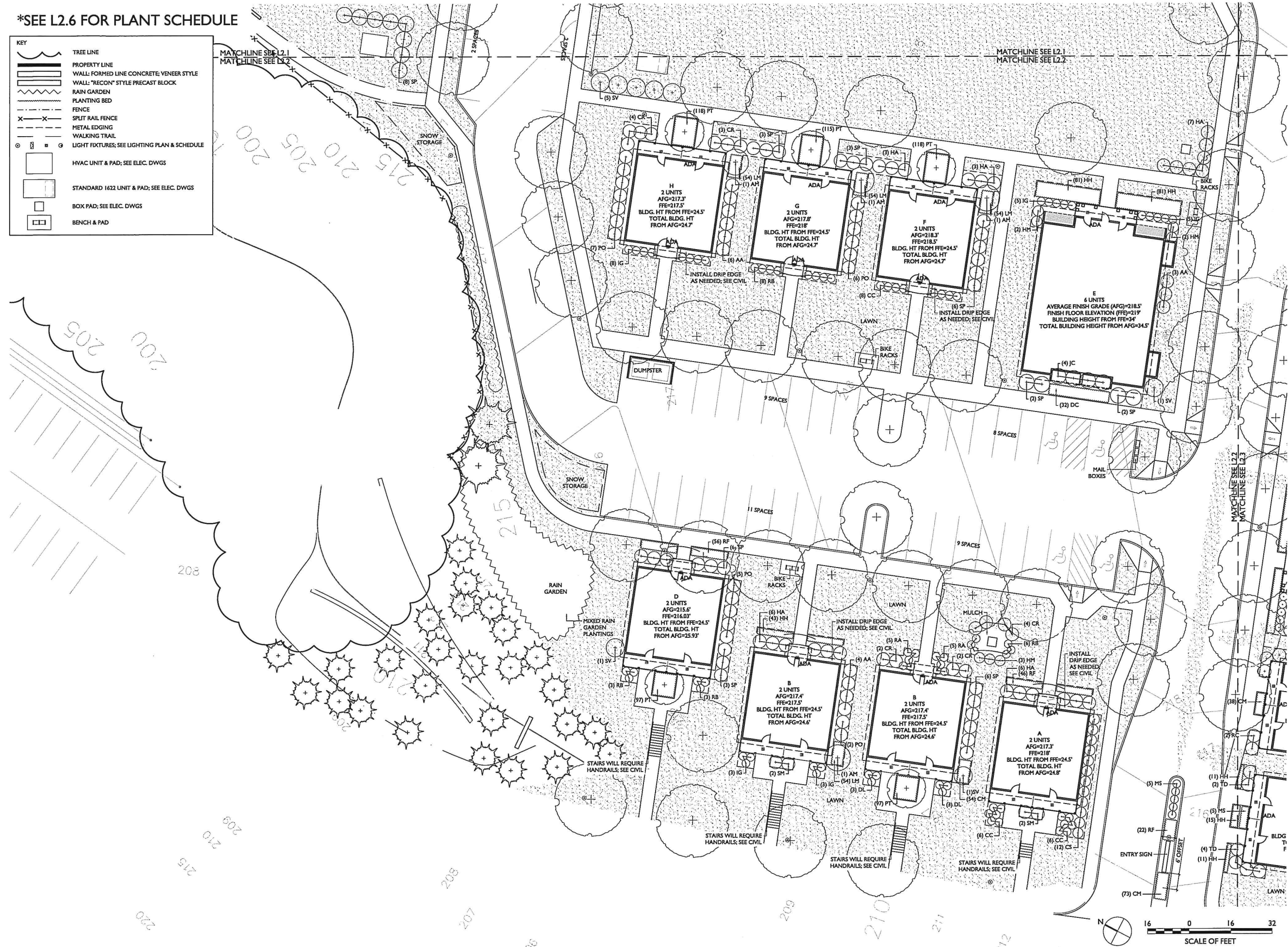
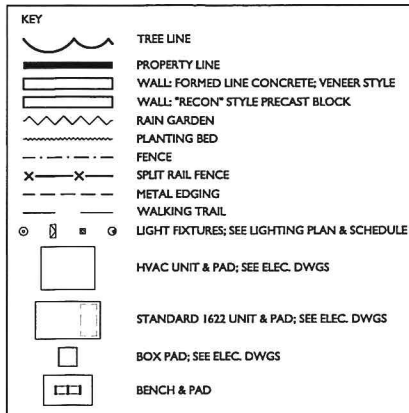
JOB NO. 244

SCALE 1/16" = 1'-0"

DATE 02.03.15

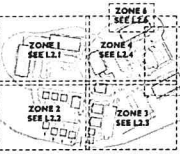
L2.

*SEE L2.6 FOR PLANT SCHEDULE



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**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**ENLARGED
PLANTING PLAN
ZONE 2**

REVISIONS

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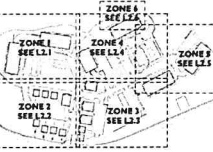
JOB NO. 244

SCALE 1/16" = 1'-0"

DATE 02.03.15

L2.2

KEY	
	TREE LINE
	PROPERTY LINE
	WALL: FORMED LINE CONCRETE; VENEER STYLE
	WALL: "RECON" STYLE PRECAST BLOCK
	RAIN GARDEN
	PLANTING BED
	FENCE
	SPLIT RAIL FENCE
	METAL EDGING
	WALKING TRAIL
	LIGHT FIXTURES; SEE LIGHTING PLAN & SCHEDULE
	
	HVAC UNIT & PAD; SEE ELEC. DWGS
	STANDARD 1622 UNIT & PAD; SEE ELEC. DWGS
	BOX PAD; SEE ELEC. DWGS
	BENCH & PAD

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GARDEN STREET APARTMENTS

BURLINGTON, VT

ENLARGED
PLANTING PLAN
ZONE 4

REVISIONS

NEW-F ALL RIGHTS RESERVED 2012 DRAWING NO.

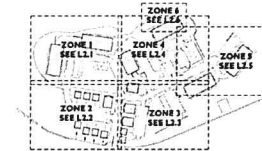
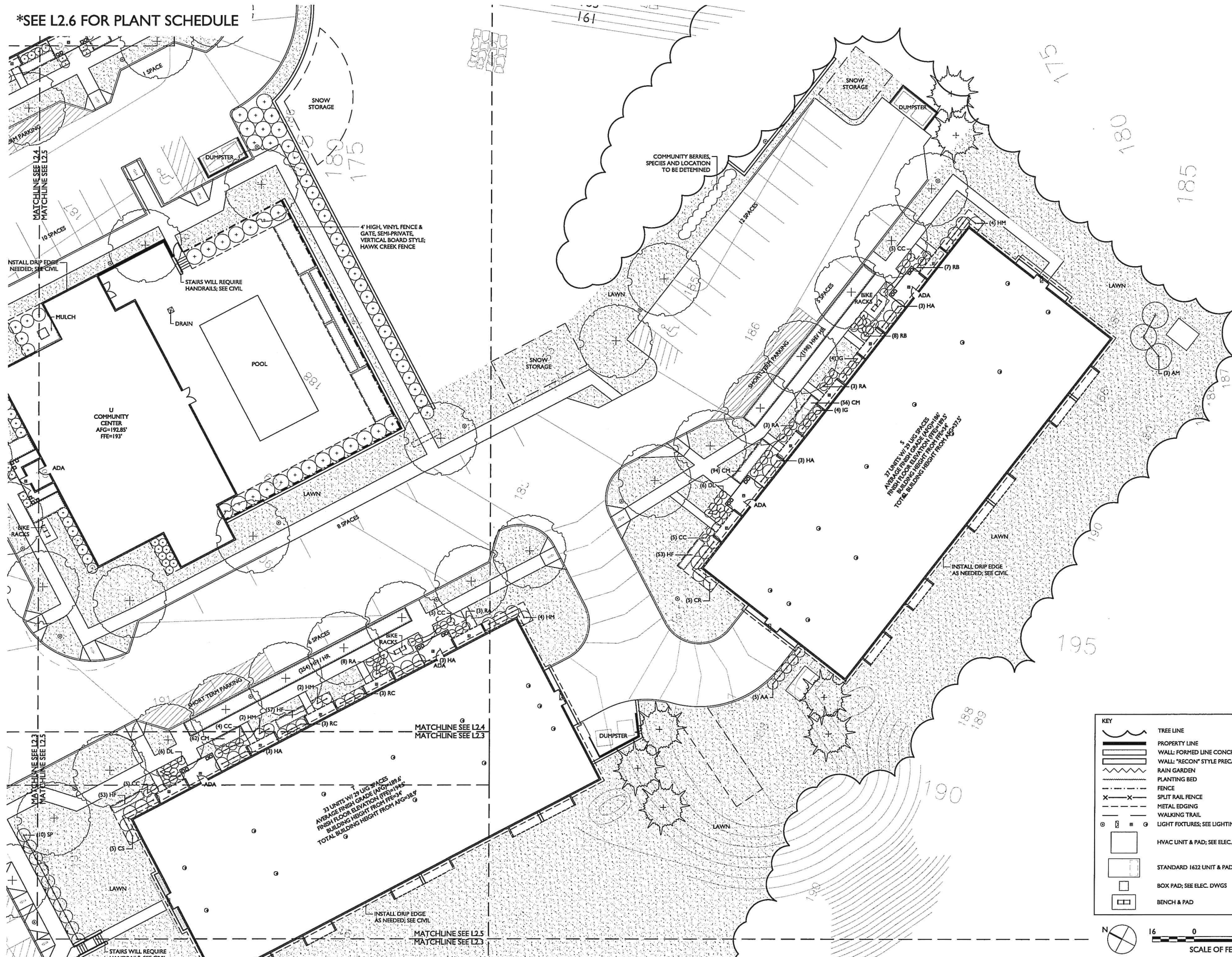
DB NO. 244

SCALE 1/16" = 1'-0"

DATE 02.03.15

2.4

*SEE L2.6 FOR PLANT SCHEDULE



ZONE KEY: NOT TO SCALE

DRAFT
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CONSTRUCTION

**GARDEN STREET
APARTMENTS**
BURLINGTON, VT

**ENLARGED
PLANTING PLAN
ZONE 5**

REVISIONS

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JOB NO. 244

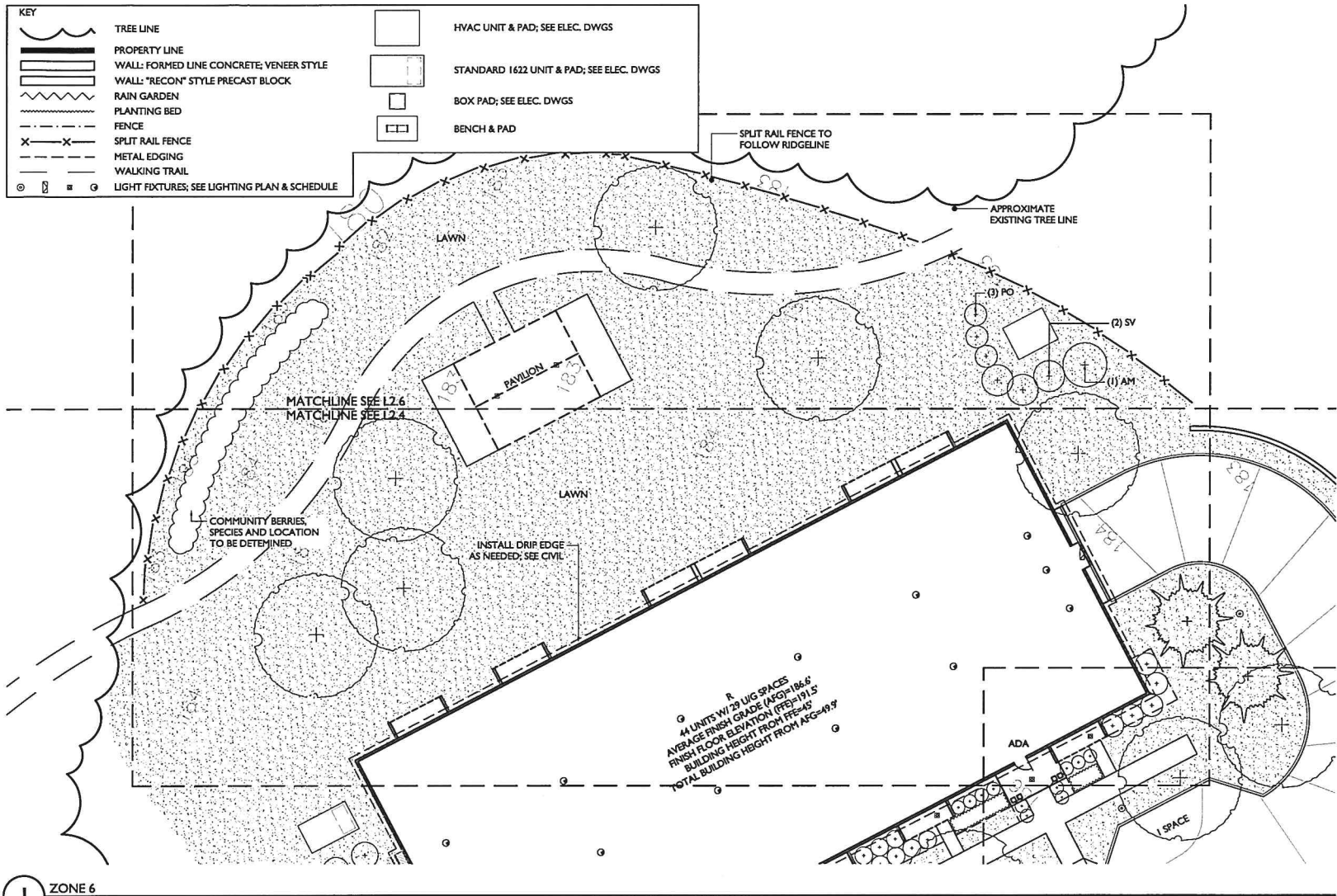
SCALE 1/16" = 1'-0"

DATE 02.03.15

L2.5

KEY	
	TREE LINE
	PROPERTY LINE
	WALL: FORMED LINE CONCRETE, VENEER STYLE
	WALL: "RECON" STYLE PRECAST BLOCK
	RAIN GARDEN
	PLANTING BED
	FENCE
	SPLIT RAIL FENCE
	METAL EDGING
	WALKING TRAIL
	LIGHT FIXTURES; SEE LIGHTING PLAN & SCHEDULE
	HVAC UNIT & PAD; SEE ELEC. DWGS
	STANDARD 1622 UNIT & PAD; SEE ELEC. DWGS
	BOX PAD; SEE ELEC. DWGS
	BENCH & PAD





TREE SCHEDULE					
KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING
EVERGREEN TREES					
PG	2	<i>Picea glauca</i>	WHITE SPRUCE	6-8'	SEE PLAN
PG1	7	<i>Picea glauca</i>	WHITE SPRUCE	8-10'	SEE PLAN
PS	3	<i>Pinus strobus</i>	WHITE PINE	6-8'	SEE PLAN
PS1	20	<i>Pinus strobus</i>	WHITE PINE	8-10'	SEE PLAN
TC	5	<i>Tsuga canadensis</i>	CANADIAN HEMLOCK	6-8'	SEE PLAN
TC1	7	<i>Tsuga canadensis</i>	CANADIAN HEMLOCK	8-10'	SEE PLAN
	26	Mixed Evergreens - Riparian Planting	MIXED SPECIES (td)	SEEDLING	SEE PLAN
DECIDUOUS TREES					
AF	21	<i>Acer x freemanii</i> 'Autumn Blaze'	AUTUMN BLAZE RED MAPLE	2.5"-3" CAL.	SEE PLAN
AR	11	<i>Acer rubrum</i>	RED MAPLE	2.5"-3" CAL.	SEE PLAN
AS	14	<i>Acer saccharinum</i>	SUGAR MAPLE	2.5"-3" CAL.	SEE PLAN
BN	4	<i>Betula nigra</i> 'Heritage' (single stem)	HERITAGE RIVER BIRCH (SINGLE STEM)	2.5"-3" CAL.	SEE PLAN
GT	51	<i>Gleditsia triacanthos</i> 'Shademaster'	SHADEMASTER HONEYLOCUST	2.5"-3" CAL.	SEE PLAN
LT	6	<i>Liriodendron tulipifera</i>	TULIPTREE	2.5"-3" CAL.	SEE PLAN
QB	16	<i>Quercus bicolor</i>	SWAMP WHITE OAK	2.5"-3" CAL.	SEE PLAN
SR	7	<i>Syringa reticulata</i>	TREE LILAC	2.5"-3" CAL.	SEE PLAN
UA	57	<i>Ulmus americana</i> 'Princeton'	PRINCETON AMERICAN ELM	2.5"-3" CAL.	SEE PLAN
ZS	13	<i>Zelkova serrata</i>	JAPANESE ZELKOVA	2.5"-3" CAL.	SEE PLAN

3 TREE SCHEDULE - SEE L2.0 FOR PLAN

EDIBLE PLANTINGS					
FA	TBD	<i>Fragaria ananassa</i> (multiple varieties)	STRAWBERRIES (multiple varieties)	#1	18" O.C.
MD	9	<i>Malus domestica</i> (multiple varieties)	APPLES (multiple varieties)	SIZE TBD	SEE PLAN
RU	TBD	<i>Rubus fruticosus</i> (multiple varieties)	BLACKBERRY (multiple varieties)	#5	4' O.C.
RI	TBD	<i>Rubus idaeus</i> (multiple varieties)	RED RASPBERRY (multiple varieties)	#3	30" O.C.
VC	24	<i>Vaccinium corymbosum</i> (multiple varieties)	HIGHBUSH BLUEBERRIES (multiple varieties)	#3	5' O.C.

4 EDIBLE PLANTING SCHEDULE - SEE L2.0 FOR TREES, SEE L2.1 TO L2.6 FOR PERENNIALS & SHRUBS

LIGHTING SCHEDULE						
KEY	QTY.	COMPANY NAME	PRODUCT NAME	PURPOSE	SPACING	PRODUCT NUMBER
L1	72	BEACON PRODUCTS	URBAN (LED)	SIDEWALK LIGHT w/ AA-44 STRUT Arms	80' O.C.	SEE CUTSHEETS
L3	80	PRESCOUTE	6" LED DOWNLIGHT - LCALED	BUILDING PORCH CAN LIGHT, GARAGE LIGHT	SEE PLAN	SEE CUTSHEETS
L5	12	SPAULDING LIGHTING	TRP LED (with motion sensor)	GARAGE WALL LIGHT	SEE PLAN	SEE CUTSHEETS
L7	74	BEACON PRODUCTS	ENDURA (LED)	GARAGE CEILING LIGHT	SEE PLAN	SEE CUTSHEETS
L8	1	BEACON PRODUCTS	URBAN (LED)	SIDEWALK LIGHT w/ AA-44 STRUT Arms (2 LIGHTS PER POLE)	SEE PLAN	SEE CUTSHEETS

5 LIGHTING SCHEDULE - SEE L1.0 FOR PLAN

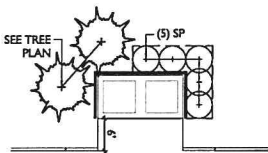
PARKING SCHEDULE	
TYPE OF SPACES	QTY.
GARAGE PARKING	164
OUTDOOR PARKING	217
SHORT-TERM / LOADING	14
TOTAL NUMBER OF SPACES	395
OUTDOOR BIKE PARKING	78

6 PARKING SCHEDULE

PLANT SCHEDULE					
KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING
SHRUBS					
AM	12	<i>Amelanchier canadensis</i>	SHADBLOW SERVICEBERRY	10-12'	SEE PLAN
AA	35	<i>Aronia arbutifolia</i> 'Brilliantissima'	'BRILLIANTISSIMA' CHOKEBERRY	#3	4' O.C.
CC	61	<i>Clethra alnifolia</i> 'Compacta'	'COMPACTA' SUMMERSWEET	#3	3' O.C.
CR	22	<i>Clethra alnifolia</i> 'Ruby Spice'	'RUBY SPICE' SUMMERSWEET	#3	5' O.C.
CO	11	<i>Cotoneaster spiculatus</i>	CRANBERRY COTONEASTER	#2	3' O.C.
CS	17	<i>Cornus alba</i> 'Sibirica'	RED TWIG DOGWOOD	#3	42" O.C.
DL	61	<i>Diervilla lonicera</i>	NORTHERN BUSH HONEYSUCKLE	#2	3' O.C.
HA	55	<i>Hydrangea arborescens</i> 'Annabelle'	SMOOTH HYDRANGEA	#2	5' O.C.
HM	32	<i>Hydrangea macrophylla</i> 'Endless Summer'	'ENDLESS SUMMER' HYDRANGEA	#3	4' O.C.
IG	92	<i>Ilex glabra</i> 'Compacta'	'COMPACTA' INKBERRY	#3	3' O.C.
IV	11	<i>Ilex verticillata</i> 'Red Sprite'	'RED SPRITE' WINTERBERRY	#3	3' O.C.
JC	8	<i>Juniperus chinensis</i> 'Sea Green'	'SEA GREEN' CHINESE JUNIPER	#5	6' O.C.
JS	23	<i>Juniperus sabina</i> 'Broadmoor'	'BROADMOOR' SAVIN JUNIPER	#3	4' O.C.
PR	8	<i>Parthenocissus tricuspidata</i>	BOSTON IVY	#1	5' O.C.
PO	40	<i>Physocarpus opulifolius</i> 'Coppertina'	'COPPERTINA' NINEBARK	#3	5' O.C.
RC	12	<i>Rhododendron 'Chionoides'</i>	'CHIONOIDES' RHODODENDRON	#3	4' O.C.
RP	10	<i>Rhododendron 'Pohjola's Daughter'</i>	'POHJOLA'S DAUGHTER' RHODODENDRON	#2	3' O.C.
RA	42	<i>Rhus aromatica</i> 'Grow-low'	'GROW-LOW' SUMAC	#2	3' O.C.
RB	56	<i>Rosa</i> 'Blushing Knockout'	'BLUSHING KNOCKOUT' SHRUB ROSE	#3	3' O.C.
SM	22	<i>Syringa meyeri</i> 'Palibin'	'DWARF KOREAN LILAC	#3	5' O.C.
SP	128	<i>Syringa patula</i> 'Miss Kim'	MANCHURIAN LILAC	#5	6' O.C.
SV	22	<i>Syringa vulgaris</i> 'Common Purple'	'COMMON PURPLE' LILAC	#5	7' O.C.
TD	12	<i>Taxus x media</i> 'Densiformis'	'DENSIFORMIS' YEW	#5	5' O.C.
GRASSES					
CA	51	<i>Calamagrostis acutiflora</i> 'Karl Foerster'	'KARL FOERSTER' FEATHER REED GRASS	#1	24" O.C.
CM	1153	<i>Carex 'Ice Dance'</i>	'ICE DANCE' SEDGE	QUART	12" O.C.
DC	102	<i>Deschampsia cespitosa</i>	TUFTED HAIR GRASS	#2	24" O.C.
MG	8	<i>Miscanthus sinensis</i> 'Gracillimus'	'GRACILLIMUS' EULALIA	#2	36" O.C.
MS	50	<i>Miscanthus sinensis</i> 'Adagio'	'ADAGIO' EULALIA	#2	30" O.C.
PV	8	<i>Panicum virgatum</i> 'Shenandoah'	'SHENENDOAH' SWITCH GRASS	#2	36" O.C.
PERENNIALS					
HF	167	<i>Hosta 'Fireworks'</i>	'FIREWORKS' HOSTA	#1	12" O.C.
HH	772	<i>Heemerocallis 'Happy Returns'</i>	'HAPPY RETURNS' DAYLILY	#1	18" O.C.
HR	407	<i>Heemerocallis 'Pardon Me'</i>	'PARDON ME' DAYLILY	#1	18" O.C.
LM	522	<i>Liriope muscari</i>	LILYTURF	FLATS	12" O.C.
PT	771	<i>Pachyandra terminalis</i>	SPURGE	FLATS	12" O.C.
PA	40	<i>Perovskia atriplicifolia</i>	RUSSIAN SAGE	1 GAL.	3' O.C.
RF	166	<i>Rudbeckia fulgida</i> 'Goldstrum'	'GOLDSTRUM' BLACK-EYED SUSAN	#1	18" O.C.
SA	24	<i>Sedum 'Autumn Joy'</i>	AUTUMN JOY SEDUM	1 GAL.	24" O.C.
		Mixed Rain Garden Plantings	MIXED SPECIES (td)	SEED	

- NOTES:
1. PLANT LIST DOES NOT INCLUDE PLANTINGS FOR RAIN GARDENS, DUMPSTER, OR TRANSFORMER SCREENING
 2. SUBSTITUTES MAY BE SELECTED DUE TO PLANT AVAILABILITY; TO BE REVIEWED BY LANDSCAPE ARCHITECT

2 SHRUB, GRASS, PERENNIAL SCHEDULE - SEE L2.1 TO L2.6 FOR PLANS

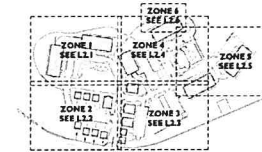


7 DUMPSTER PLANTING, TYP.

1/16" = 1' - 0"

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GARDEN STREET
APARTMENTS
BURLINGTON, VT

ENLARGED
PLANTING PLAN
ZONE 6 +
SCHEDULES

REVISIONS

DATE

SCALE

1/16" = 1' - 0"

DATE

02.03.15

JOB NO.

244

DRAWING NO.

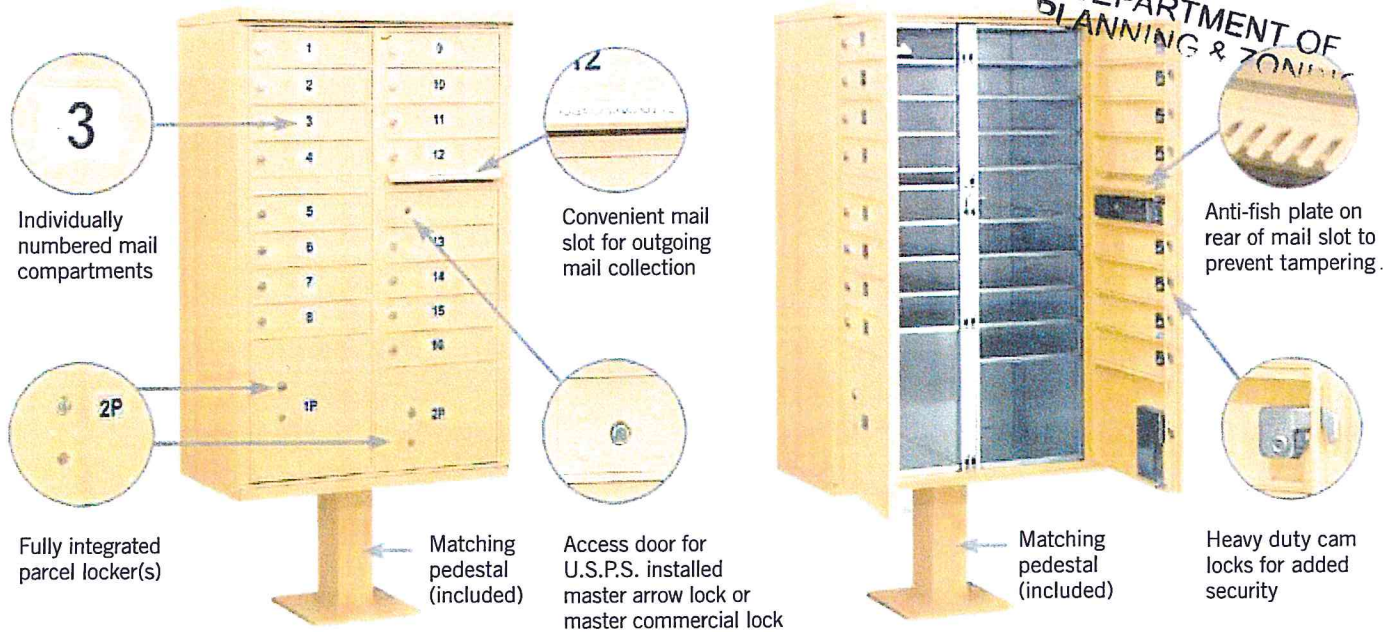
L2.6

Salsbury Industries is officially licensed and authorized by the U.S. Postal Service to manufacture Cluster Box Units (CBU's).

EXHIBIT #

RECEIVED
FEB 18 2015
DEPARTMENT OF PLANNING & ZONING

STANDARD FEATURES

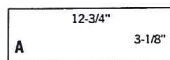


Front views of 3316 in sandstone finish displayed

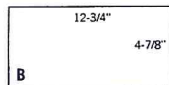
CBU SPECIFICATIONS & OPTIONS

MAILBOX DOOR SIZES

Each aluminum mailbox door includes a heavy duty five (5) pin cylinder cam lock with a dust/rain shield and three (3) keys.



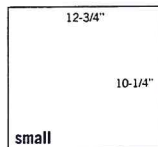
#3351 ¹ Replacement
"A" door and lock
\$50.00



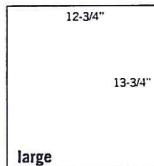
#3352 ¹ Replacement
"B" door and lock
\$60.00

PARCEL LOCKER DOOR SIZES

Each CBU includes one or two (2) fully integrated parcel lockers. Parcel lockers offer tenants a convenient way to receive packages on site and are fit with a two (2) key security system.



#3353 ¹ Replacement parcel
locker door and tenant lock - small
\$80.00



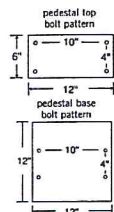
#3354 ¹ Replacement parcel
locker door and tenant lock - large
\$90.00

PEDESTALS

#3385 ¹ Replacement pedestal
for #3316 and #3313 (14-1/2" H)
\$125.00

#3395 ¹ Replacement pedestal
for #3308 and #3312 (28-1/2" H)
\$125.00

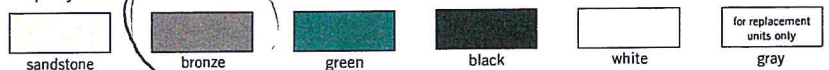
#3394 Pedestal mounting kit
for new concrete installations
(4) 1/2" X 8" anchor (J) bolts
\$25.00



FINISHES

Durable and corrosion resistant CBU's feature a powder coated finish available in sandstone, bronze, green, black or white. Note - gray is available for replacement units only and is not available on Regency Decorative CBU's and accessories.

1 Specify



IDENTIFICATION SYSTEMS

Each CBU mailbox door has a 1" high number (1-8, 1-12, 1-16, 1-13 for Type I, Type II, Type III and Type IV, respectively). The outgoing mail compartment is labeled "Outgoing Mail" and the parcel locker(s) are labeled with a "1P" on #3312 and #3313 and with a "1P" and a "2P" on #3308 and #3316. Custom identification systems are available as an option upon request.

CUSTOM ENGRAVED DOOR PLACARDS

1-3/4" W x 1-1/2" H custom engraved self-adhesive door placards are available as an option upon request. (#3367 - \$3.00)



CUSTOM ENGRAVED UNIT PLACARDS

8" W x 1" H custom engraved self-adhesive unit placards are available as an option upon request. (#3363 - \$15.00)

BUILDING 9

#3363

LOCKS

Each CBU mailbox door includes a heavy duty five (5) pin cylinder cam lock with a dust/rain shield and three (3) keys (2,000 different key changes). (#3390 - \$15.00)

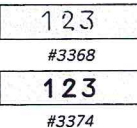
- Additional keys per lock when ordering (#3398 - \$3.00)
- Key blanks - box of (50) (#3399 - \$35.00)



#3390

CUSTOM ENGRAVED DOORS

- Custom engraved door - regular (#3368 - \$5.00)
- Custom engraved door - black filled (#3374 - \$5.00)



OUTGOING MAIL COMPARTMENTS

One additional compartment in each CBU is labeled "Outgoing Mail" and includes a weather protection flap and an 11-3/4" W x 3/4" H mail slot.

OUTGOING MAIL SLOT PLUG KIT

An outgoing mail slot plug kit is available for installations not serviced by the U.S.P.S. (#3370 - \$35.00)

MASTER COMMERCIAL LOCK

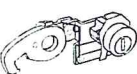
Factory installed if for private access - for access door and parcel lockers - with (2) keys (#3375 - \$30.00)



#3375

TENANT PARCEL LOCKER LOCK

For parcel locker door - with (3) keys (#3376 - \$40.00)



#3376

Note: For E series replacement CBU locks, see 3390-E on page 62.

EXHIBIT # 11

Date: Feb 2, 2015



RECEIVED
Swaney Lighting Associates
15 Pleasant Hill Rd
Scarborough ME 04074
Phone: (207) 883-7100
From: THERESA FREEMAN X
DEPARTMENT OF
PLANNING & ZONING

Project Grove St Apartments - Burl VT
Quote# SLA14-27041
Location burlington vt
Contact:

ATTACHED WE ARE SENDING YOU 1 COPIES OF THE FOLLOWING ITEMS:

- | | | |
|-----------------------------------|--|--------|
| ☐ Drawings | ☐ Specifications | Other: |
| ☐ Prints | ☐ Information | |
| ☐ Plans | ☒ Submittals | |

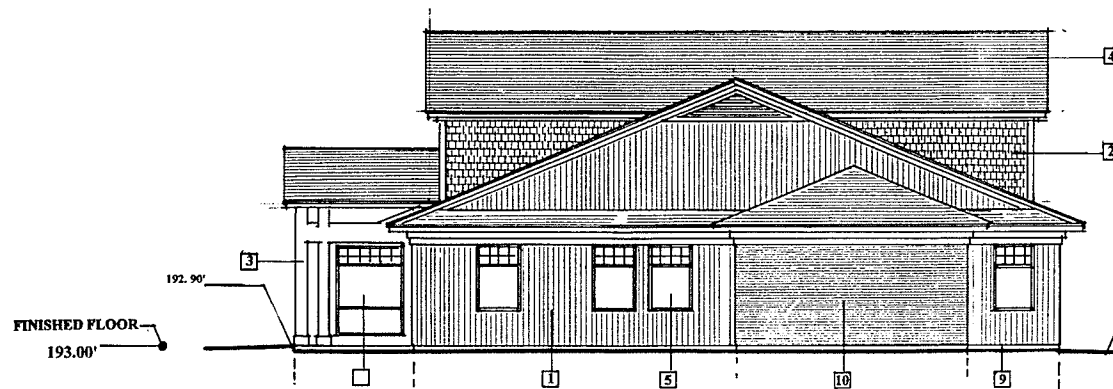
THESE ARE TRANSMITTED FOR:

- | | | |
|--|--|---------------------------------|
| ☐ Prior Approval | ☐ Resubmittal for Approval | ☐ Record |
| ☐ Approval | ☐ Corrections | Bids due on: |
| ☐ Approval as Submitted | ☐ Your Use | Other: |
| ☐ Approval as Noted | ☒ Review and Comment | |

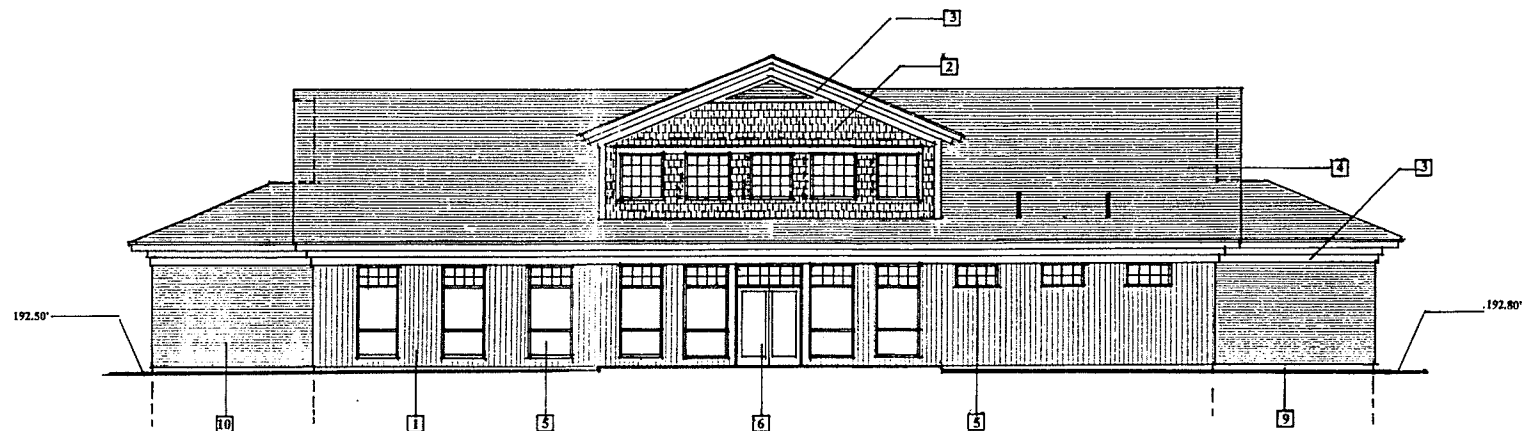
Type	MFG	Part
L1-2	BEACON PRODUCTS	CAP-21-24NB-27-4K-T2-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L1-3	BEACON PRODUCTS	CAP-21-24NB-27-4K-T3-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L1-4	BEACON PRODUCTS	CAP-21-24NB-27-4K-T4-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L2	BEACON PRODUCTS	CAP-21-24NB-55-4K-T3-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-B-P-BBT
L3	PRESCOLITE	LC6LED120 / 6LCLED635K8
L5	SPAULDING	TRP30L-4K-035-4-U-BL-SCP
2L1-4	BEACON PRODUCTS	2-CAP-21-24NB-27-4K-T4-UNV-3RNW-BBT
	BEACON PRODUCTS	AA44-S-4-C-P-BBT

DESCRIPTION OF EXTERIOR MATERIALS

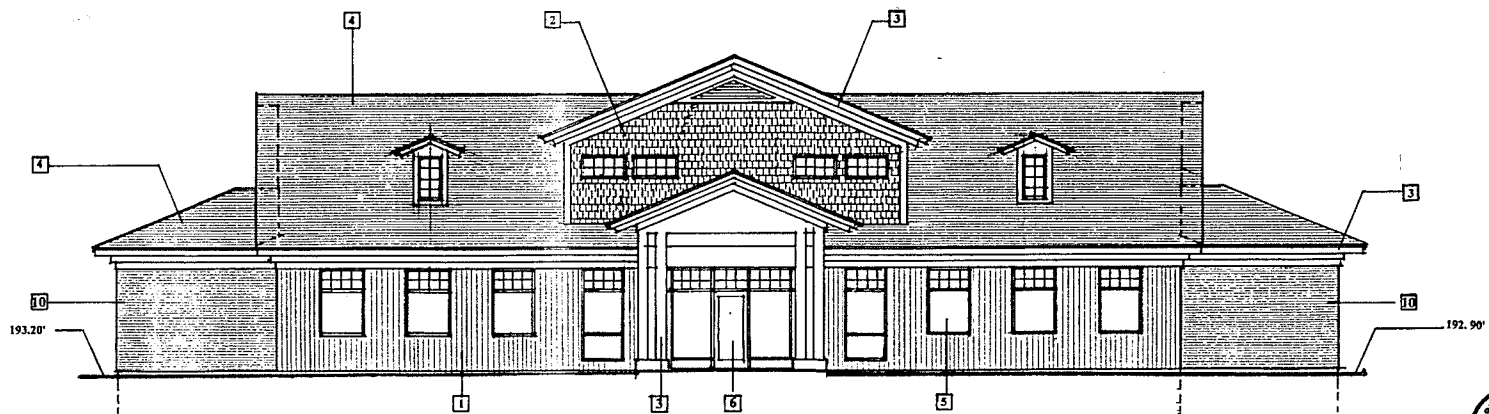
- | | | |
|----|---------------------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL "SHINGLE" SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 4
DOOR TRIM: 1 X 4
FRIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.25. COLOR SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.27 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.25 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |



SOUTH ELEVATION NORTH ELEVATION SIM. BUT OPPOSITE
1/8" = 1' - 0"



EAST ELEVATION
1/8" = 1' - 0"



WEST ELEVATION
1/8" = 1' - 0"

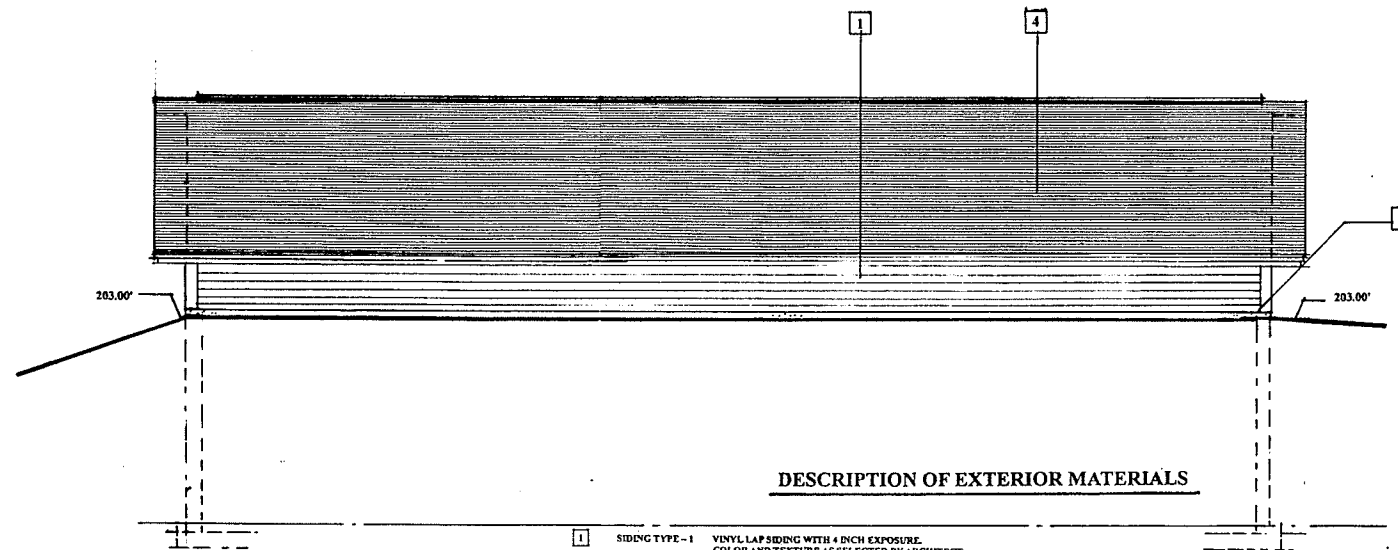
BUILDING U

FFE= 193.00'

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.

GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

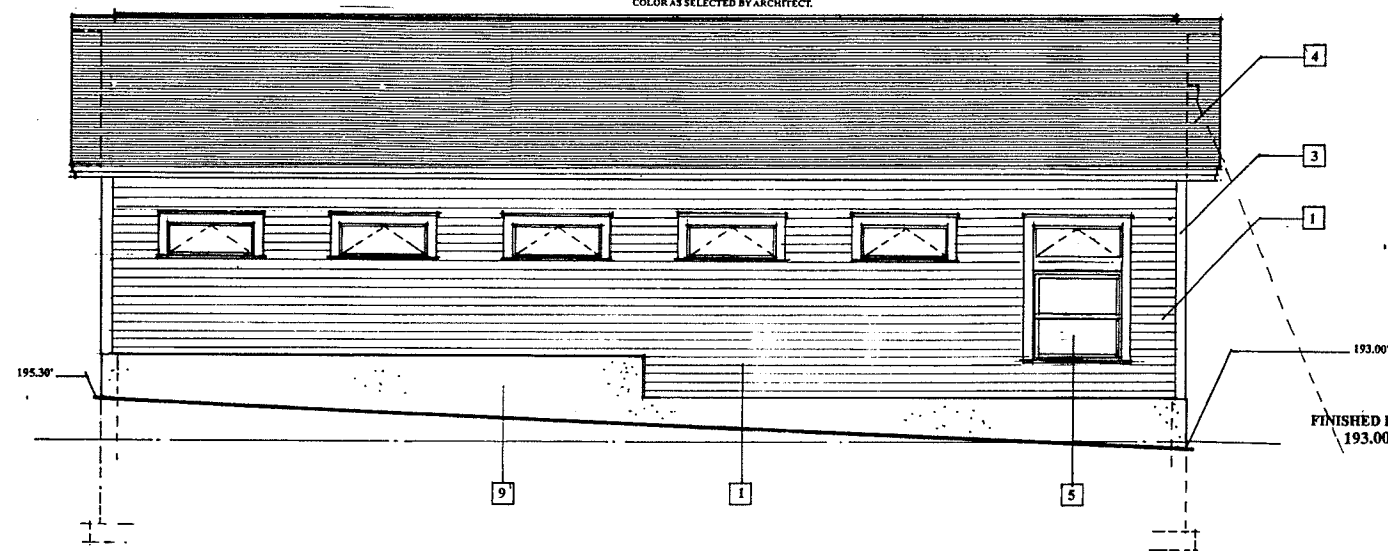




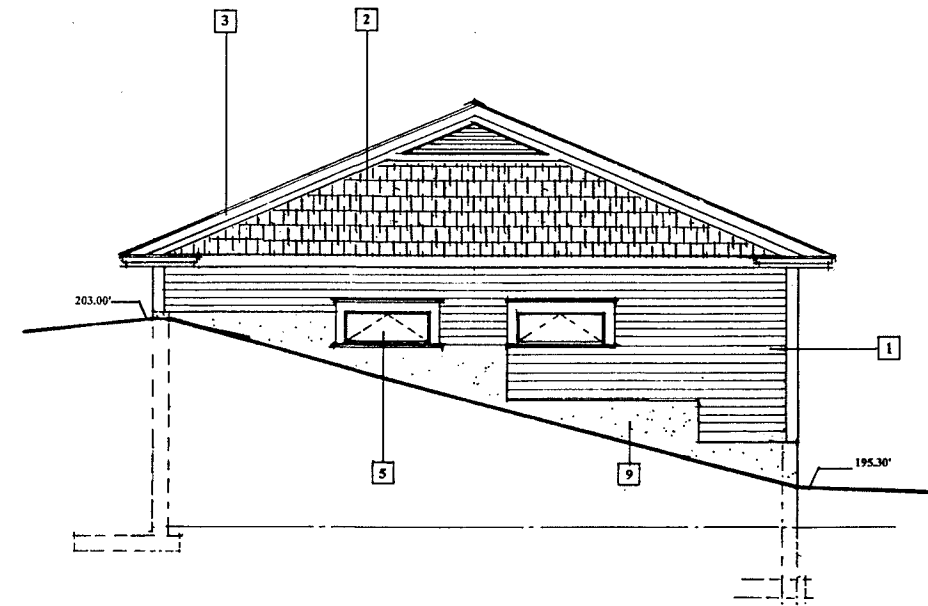
WEST ELEVATION
1/4" = 1' - 0"

DESCRIPTION OF EXTERIOR MATERIALS

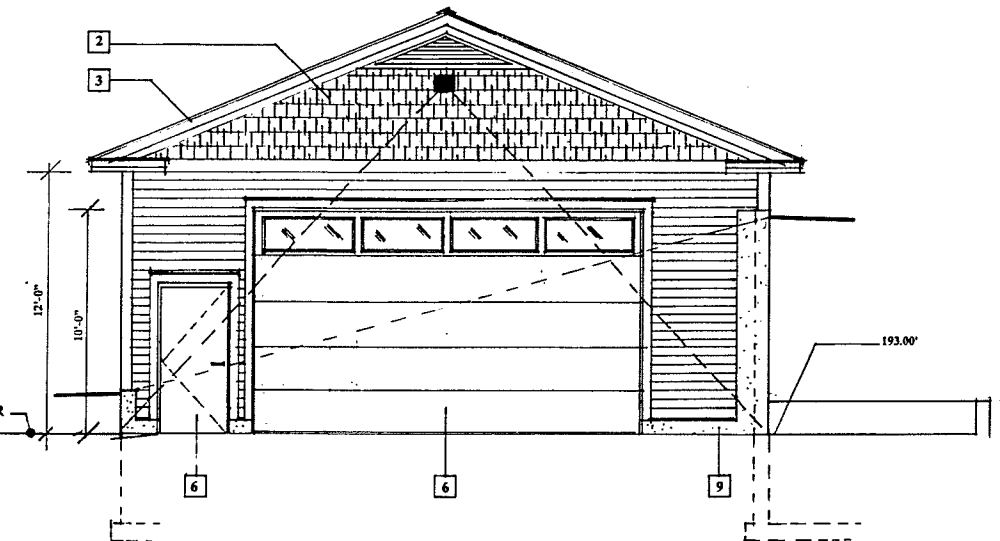
- | | | | | | |
|---|---------------------------|---|----|-----------------|--|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. | 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 2 | VINYL "SHINGLE" SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. | 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL. COLOR AS SELECTED BY ARCHITECT. SIZES AS FOLLOWS:
WINDOW TRIM: 1 X 4
CORNER TRIM: 1 X 8
DOOR TRIM: 1 X 4
PIEZE TRIM: 1 X 10 | 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. | 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND COLOR AS SELECTED BY ARCHITECT |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR SELECTED BY ARCHITECT. | | | |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. | | | |



EAST ELEVATION
1/4" = 1' - 0"



SOUTH ELEVATION
1/4" = 1' - 0"



NORTH ELEVATION
1/4" = 1' - 0"

BUILDING G

FFE= 193.00'



NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE

CONSTRUCTION
This drawing is the property of MICHAEL L. DUGAN ARCHITECT and is not to be reproduced or used in any manner without the written consent of MICHAEL L. DUGAN ARCHITECT.

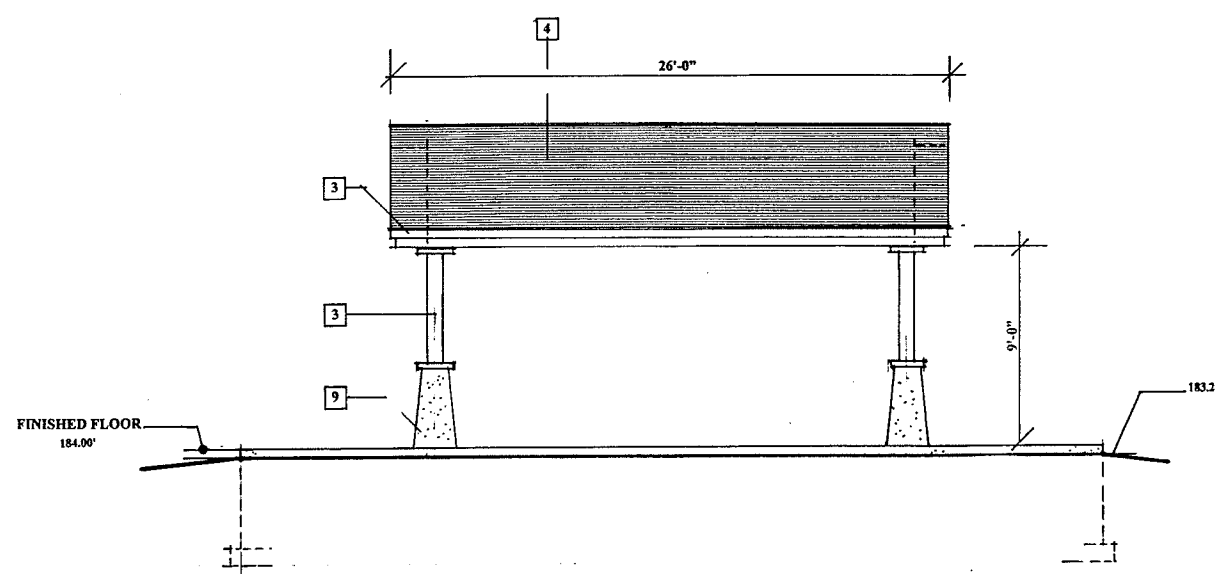
**ELEVATIONS OF
BUILDING Q**

**MICHAEL DUGAN
ARCHITECT**
2000 SOUTH STREET
SUITE 100
BURLINGTON, VT 05401
(802) 244-1111
www.michaelduganarchitect.com

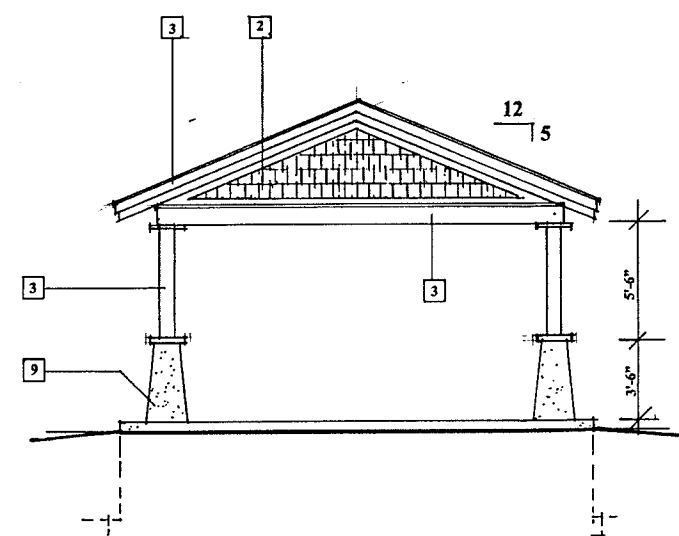
**GARDEN STREET APARTMENTS
MAINTENANCE GARAGE
GARDEN STREET
BURLINGTON VERMONT**

FEBRUARY 16, 2015

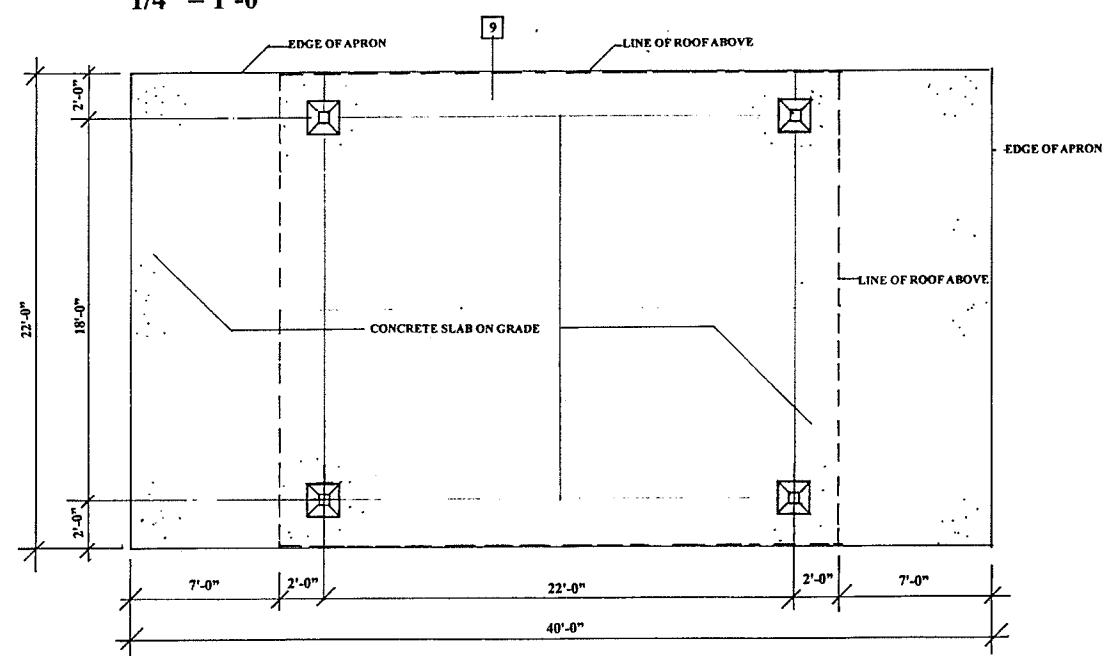
A-8.0



SIDE ELEVATION
1/4" = 1'-0"



END ELEVATION
1/4" = 1'-0"



FLOOR PLAN W/ APRON
1/4" = 1'-0"

PAVILION

FFE= 184.00'

DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|----|---------------------------|---|
| 1 | SIDING TYPE - 1 | VINYL LAP SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
| 2 | SIDING TYPE - 1 | VINYL SHINGLE SIDING WITH 4 INCH EXPOSURE. COLOR AND TEXTURE AS SELECTED BY ARCHITECT. |
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WINDOW TRIM: 1 X 4
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DOOR TRIM: 1 X 4
PIEZE TRIM: 1 X 10 |
| 4 | ROOFING: | ASPHALT 3-DIMENSIONAL STYLE SHINGLES (35 YEAR MIN.) COLOR AS SELECTED BY ARCHITECT. |
| 5 | WINDOWS: | EXTRUDED VINYL WINDOWS W/ LOW E COATED, ARGON FILLED INSULATED GLAZING, MAXIMUM U-FACTOR OF 0.35. COLOR AS SELECTED BY ARCHITECT. |
| 6 | EXTERIOR DOORS: | INSULATED FIBERGLASS DOOR W/ INSULATED GLAZING. MAXIMUM U-FACTOR OF 0.37 FOR OPAQUE DOORS AND A MAXIMUM U-FACTOR OF 0.35 FOR GLAZING. COLOR AS SELECTED BY ARCHITECT. |
| 7 | DECKING: | DECKING SHALL CONSIST OF COMPOSITE MATERIAL. COLOR AS SELECTED BY ARCHITECT. |
| 8 | PORCH RAILINGS: | METAL GUARDRAIL SYSTEM. COLOR AS SELECTED BY ARCHITECT. |
| 9 | FOUNDATIONS: | POURED-IN-PLACE CONCRETE |
| 10 | SIDING TYPE 3: | BRICK VENEER - COMMON BOND. COLOR AS SELECTED BY ARCHITECT. |

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE

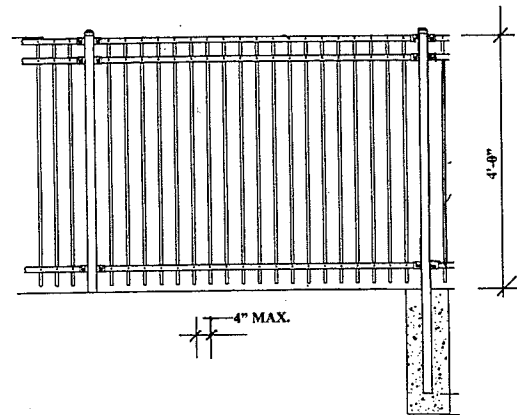
FLOOR PLAN W/ APRON
SIDE ELEVATION
END ELEVATION

MICHAEL DUGAN
ARCHITECT
100 N. MAIN STREET, SUITE 100
BURLINGTON, VT 05401
TEL: 802.255.1234
WWW.MICHAELDUGANARCHITECT.COM

GARDEN STREET APARTMENTS
PAVILION
GARDEN STREET
BURLINGTON
VERMONT

FEBRUARY 16, 2015

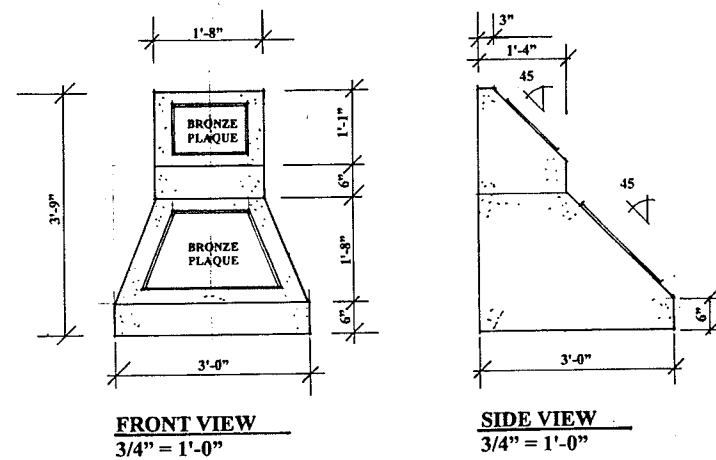
A-9.0



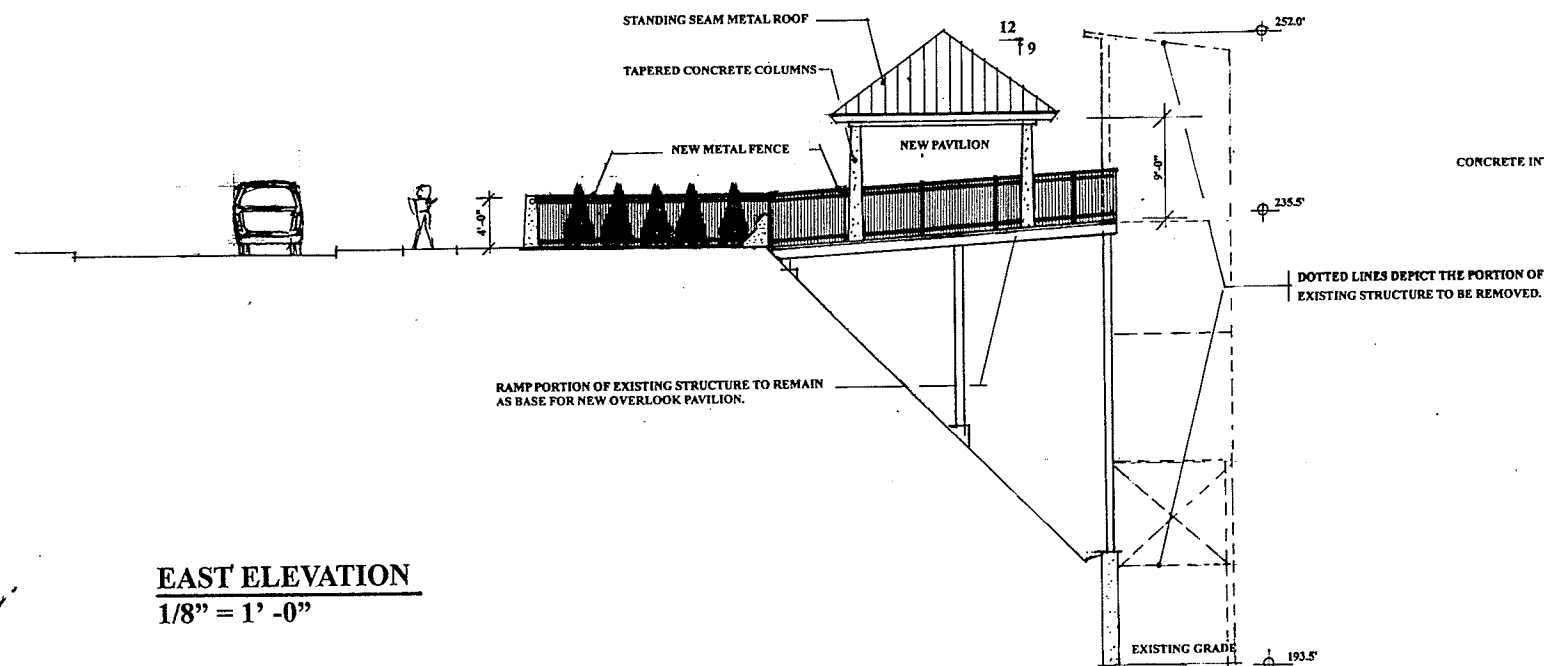
Merchants Metals
the first name in fence solutions

MONROE STYLE 3 RAIL
 8" SECTION 3/4" PICKET
(Nom. Dimension)

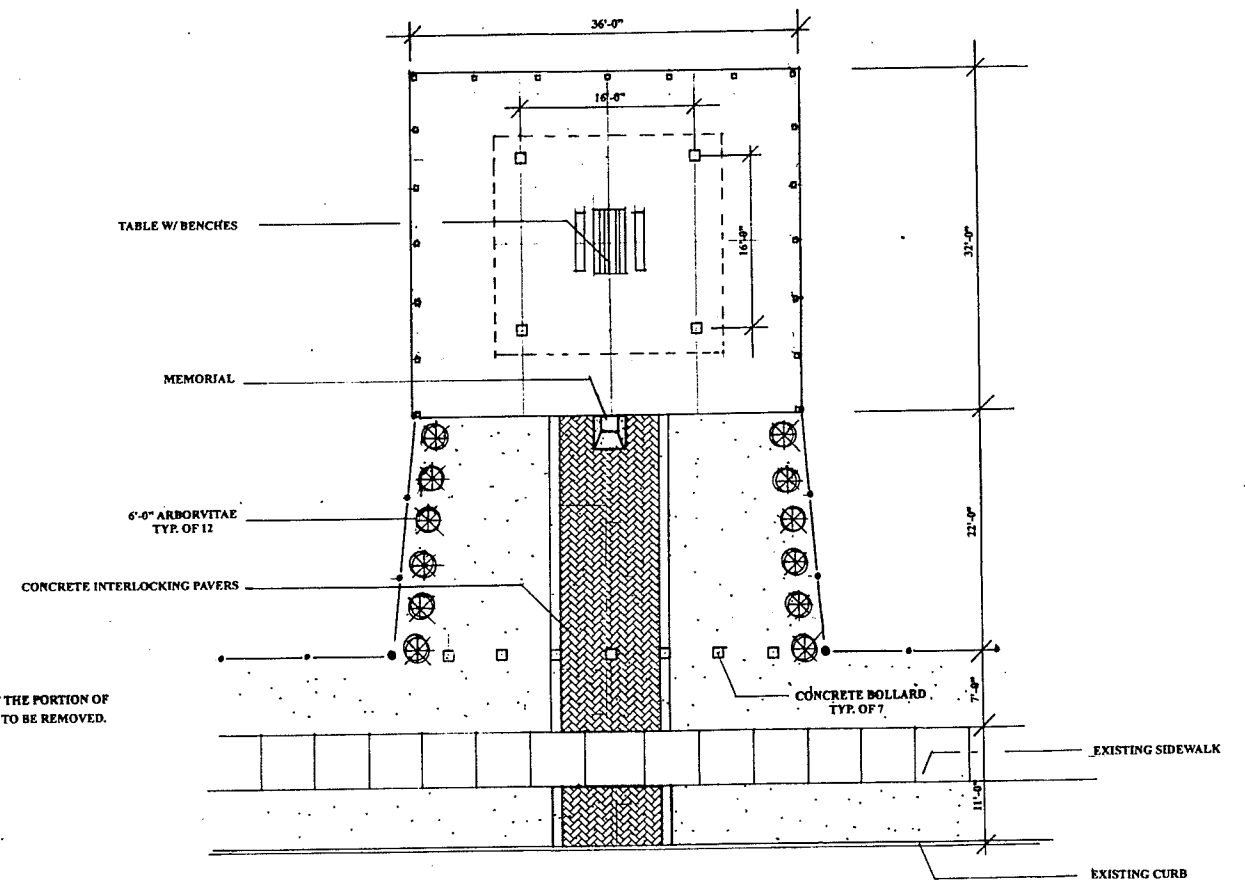
TYPICAL FENCE DETAIL



MEMORIAL DETAILS



EAST ELEVATION
 1/8" = 1' - 0"



SITE PLAN
 1/8" = 1'-0"



NOTE:
 GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON THIS DRAWING PRIOR TO CONSTRUCTION.
 GENERAL CONTRACTOR IS TO VERIFY ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

CONFIDENTIAL
 This drawing is the property of MICHAEL L. DUGAN ARCHITECT and is not to be copied, reproduced, or otherwise used in whole or in part without the written consent of MICHAEL L. DUGAN ARCHITECT.

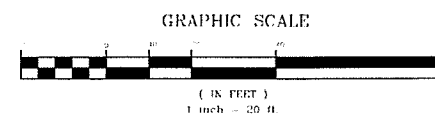
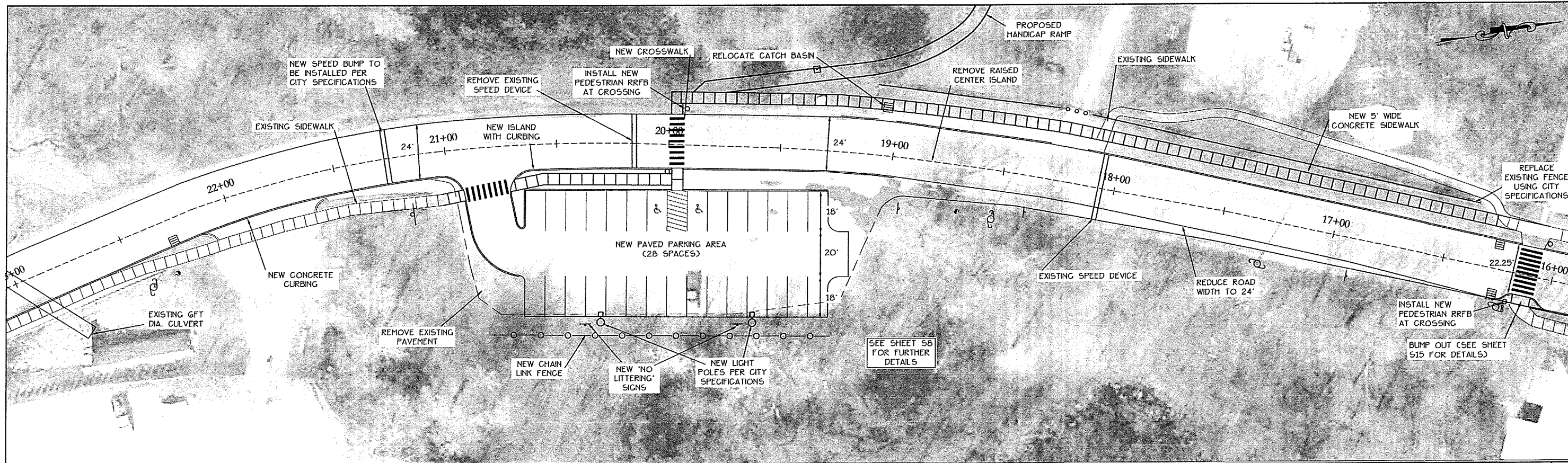
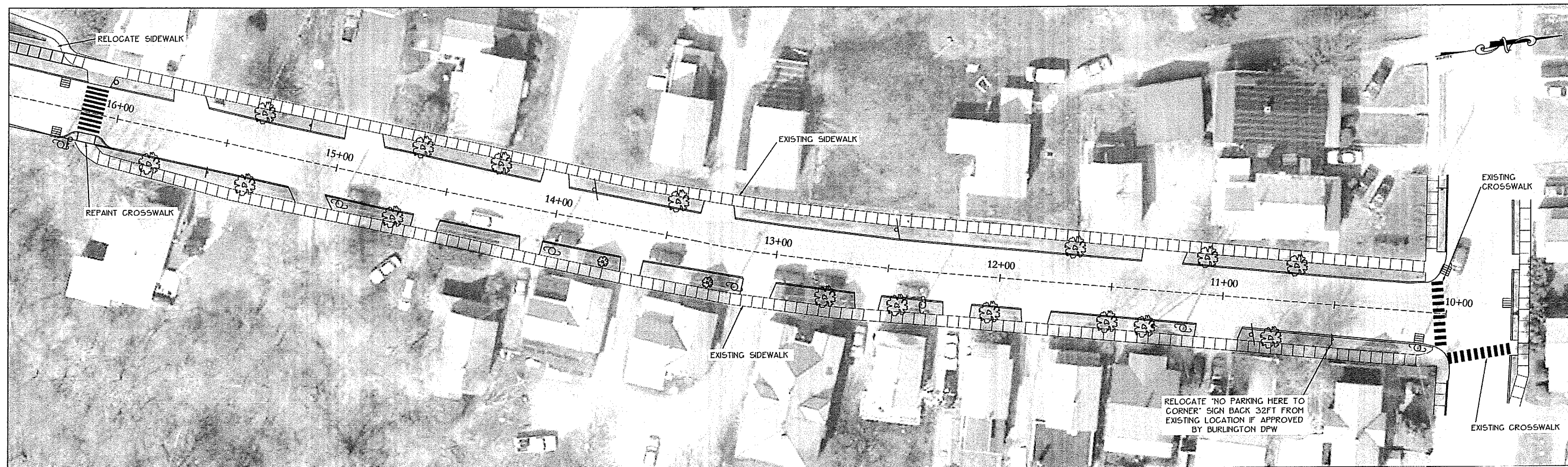
**SITE PLAN
 EAST ELEVATION
 SOUTH ELEVATION**

**MICHAEL DUGAN
 ARCHITECT**
VERMONT ARCHITECT
 1000 STATE STREET
 SUITE 100
 BURLINGTON, VT 05401
 TEL: 860-249-1111
 FAX: 860-249-1112

**GARDEN STREET APARTMENTS
 OVERLOOK @ GROVE STREET
 GARDEN STREET
 BURLINGTON, VERMONT**

FEBRUARY 16, 2015

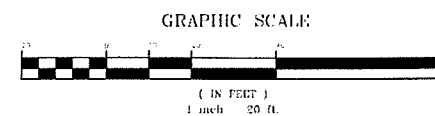
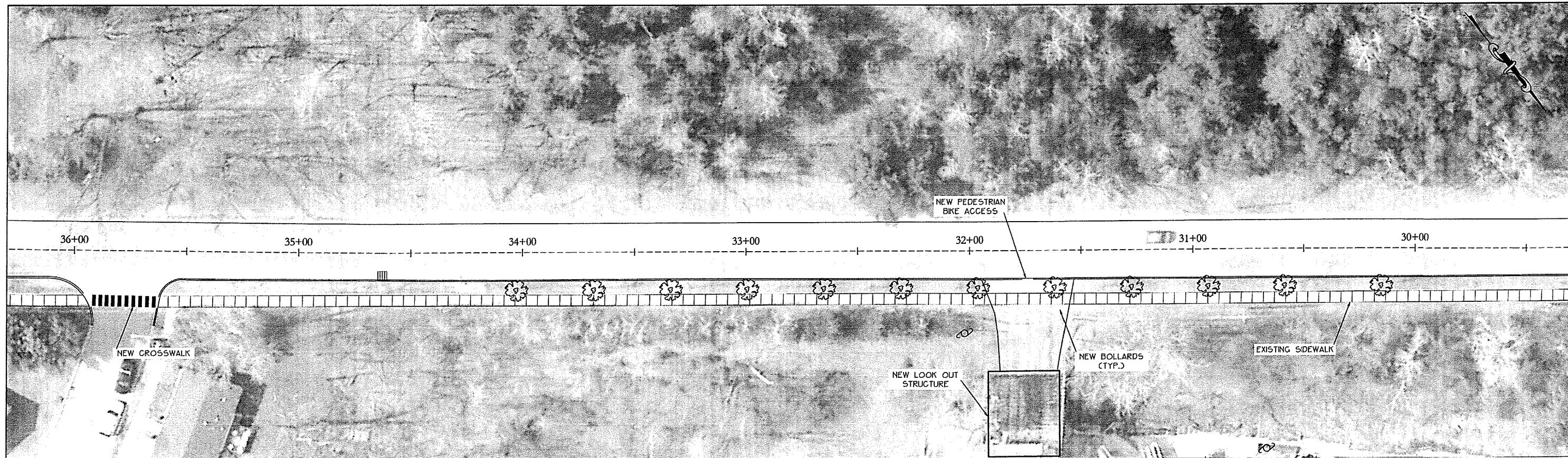
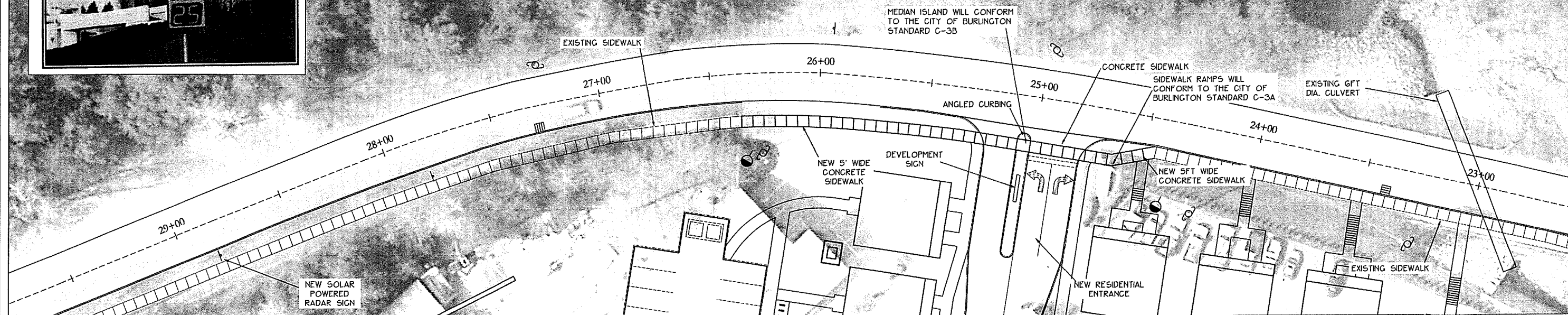
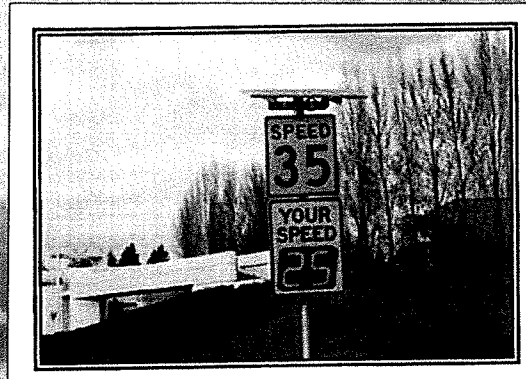
A-10



DATE: 9/2/14
SURVEY: ORCA
DESIGN: OTHERS/DBCA
DRAWN: BLS/BMC
CHECKED: FJD
SCALE: 1"=20'

REVISION: Updated for Final Submittal
☐ RECORD DRAWING
☒ FINAL
☐ PRELIMINARY
☐ SKETCH/CONCEPT
O'LEARY-BURKE
 CIVIL ASSOCIATES, PLC
 1 CONVENT DRIVE, SUITE 1
 BURLINGTON, VT 05401
 PHONE: 802-249-0000
 FAX: 802-249-0001

IRELAND PROPERTY
 GROVE STREET PEDESTRIAN IMPROVEMENTS
 DATE: 7-2-2014
 BY: JCB
 PLAN SHEET 1 OF 1



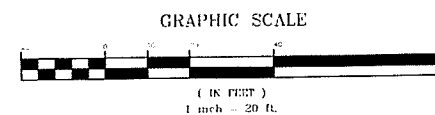
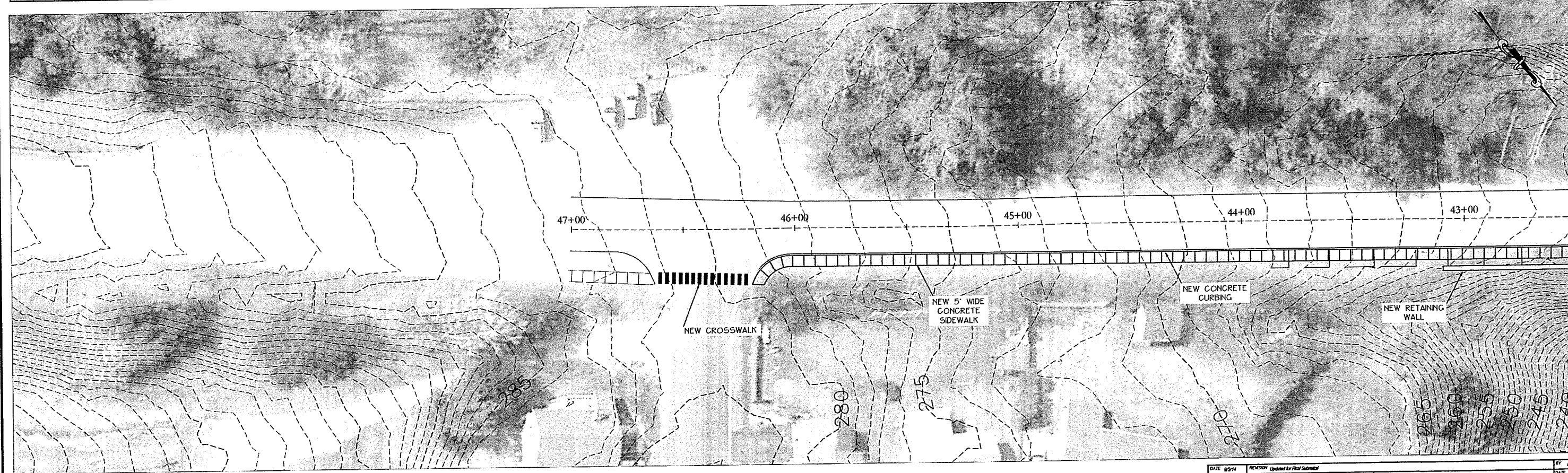
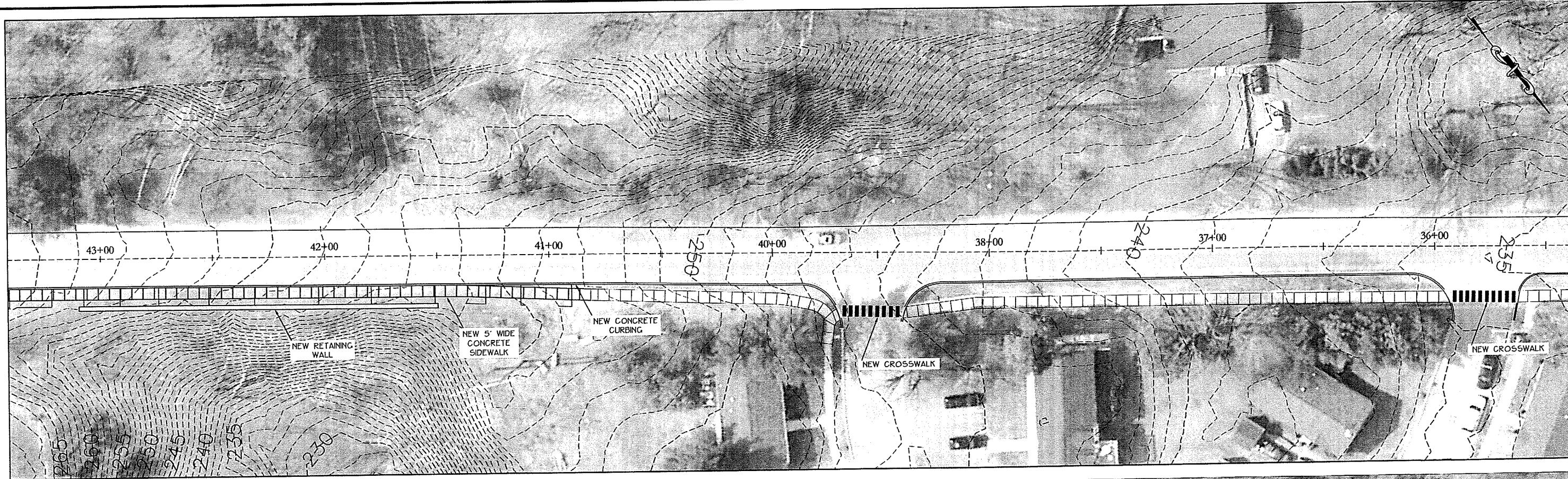
DATE: 9/2/14	REVISION: Updated for Final Submittal
SURVEY: OBER	☐ RECORD DRAWING ☐ PRELIMINARY
DRAWN: O'BRIEN/GORCA	☒ FINAL ☐ SKETCH/CONCEPT
CHECKED: B.B.M.C.	
SCALE: 1"=20'	

O'LEARY-BURKE
CIVIL ASSOCIATES, P.C.

1 CORPORATE DRIVE, SUITE 1
BURLINGTON, VT 05401
PHONE: 878-8880

IRELAND PROPERTY
Grove Street
Burlington, VT

GROVE STREET PEDESTRIAN IMPROVEMENTS



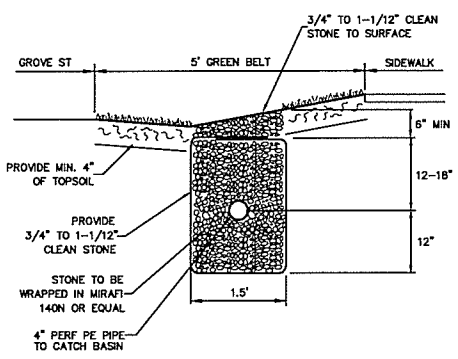
DATE: 8/2/14	REVISION: Updated for Final Submission
SURVEY: OBCA	☒ RECORD DRAWING ☐ PRELIMINARY
DESIGN: OTHERS/ONCA	☒ FINAL ☐ SKETCH/CONCEPT
DRAWN: JLB/PHC	
CHECKED: PJD	
SCALE: 1"=20'	

IRELAND PROPERTY	
Grove Street	Burlington, VT
GROVE STREET PEDESTRIAN IMPROVEMENTS	

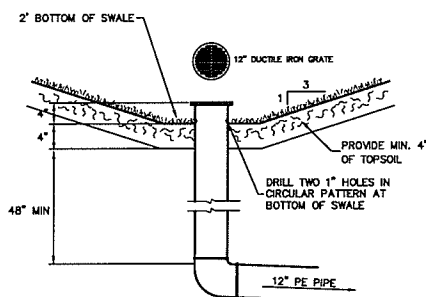
NOTE: MAINTAIN 2% SLOPE THROUGHOUT HANDICAP PARKING SPACE AND 5% MAX TO PARK ACCESS RAMP

Legend

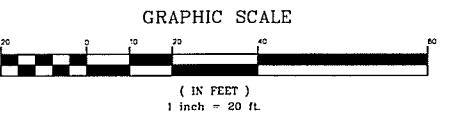
- PROJECT BOUNDARY
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- EDGE OF PAVEMENT
- PROPOSED STORMLINE
- WATERCOURSE
- PROPOSED FRENCH DRAIN



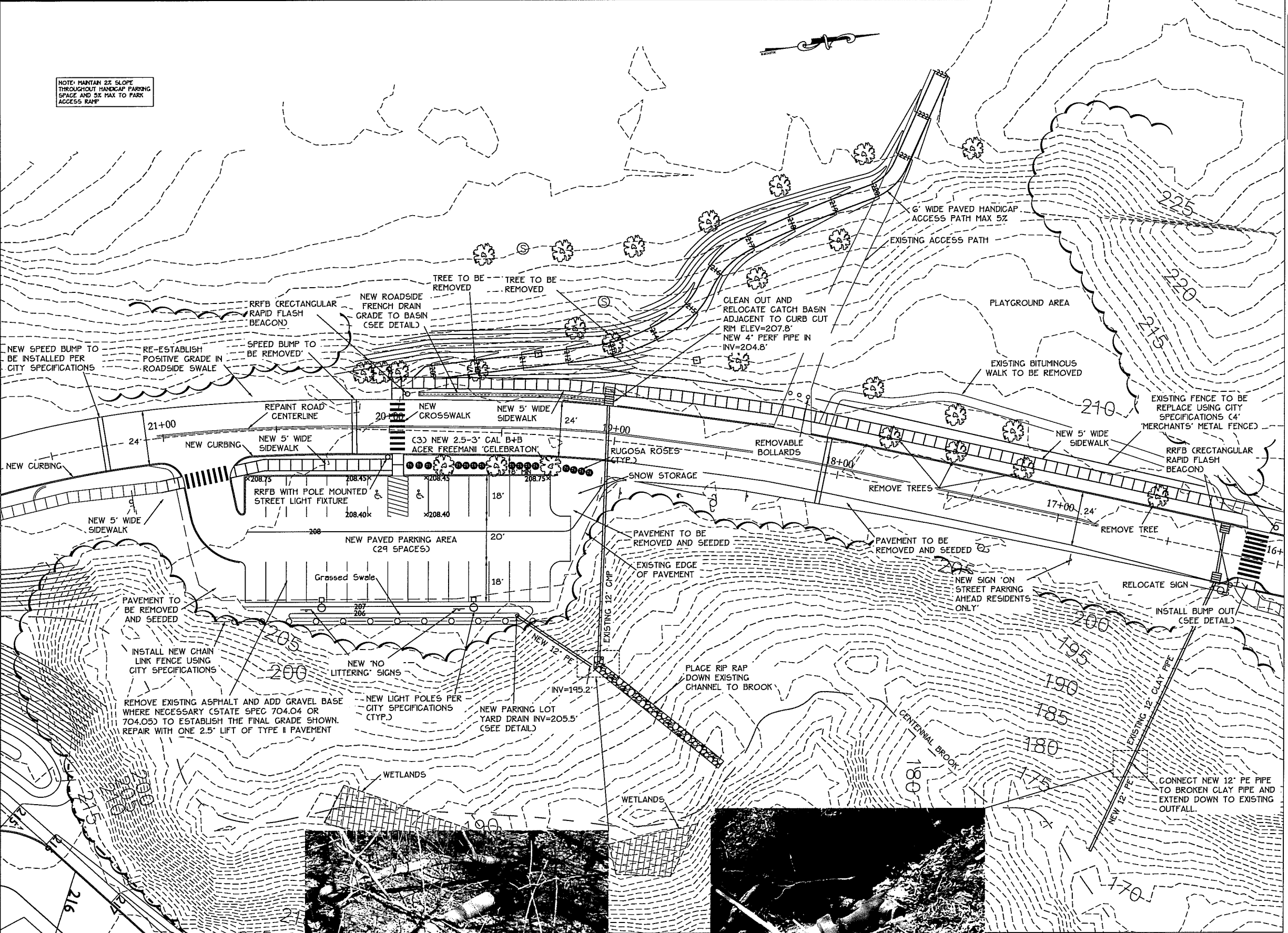
ROADSIDE FRENCH DRAIN
NTS



PARKING LOT
YARD DRAIN DETAIL
NTS



DATE: 9/3/14	REVISION: Updated for Final Submittal	BY: BWC
SURVEY: DBCA	☐ RECORD DRAWING ☐ PRELIMINARY	DATE: 2-23-14
DESIGN: OTHERS/DBCA	☒ FINAL ☐ SKETCH/CONCEPT	DATE: 2011-02
DRAWN: BLS/BWC	O'LEARY-BURKE	PROJECT: IRELAND PROPERTY
CHECKED: PLO	CIVIL ASSOCIATES, PLLC	LOCATION: Burlington, VT
SCALE: 1"=20'	1 CORPORATE DRIVE, SUITE 1 BURLINGTON, VT 05403 PHONE: 878-9950 FAX: 878-9959 E-MAIL: o'b@olearyburke.com	PLAN SHEET # S8



RECEIVED
FEB 18 2015
DEPARTMENT OF
PLANNING

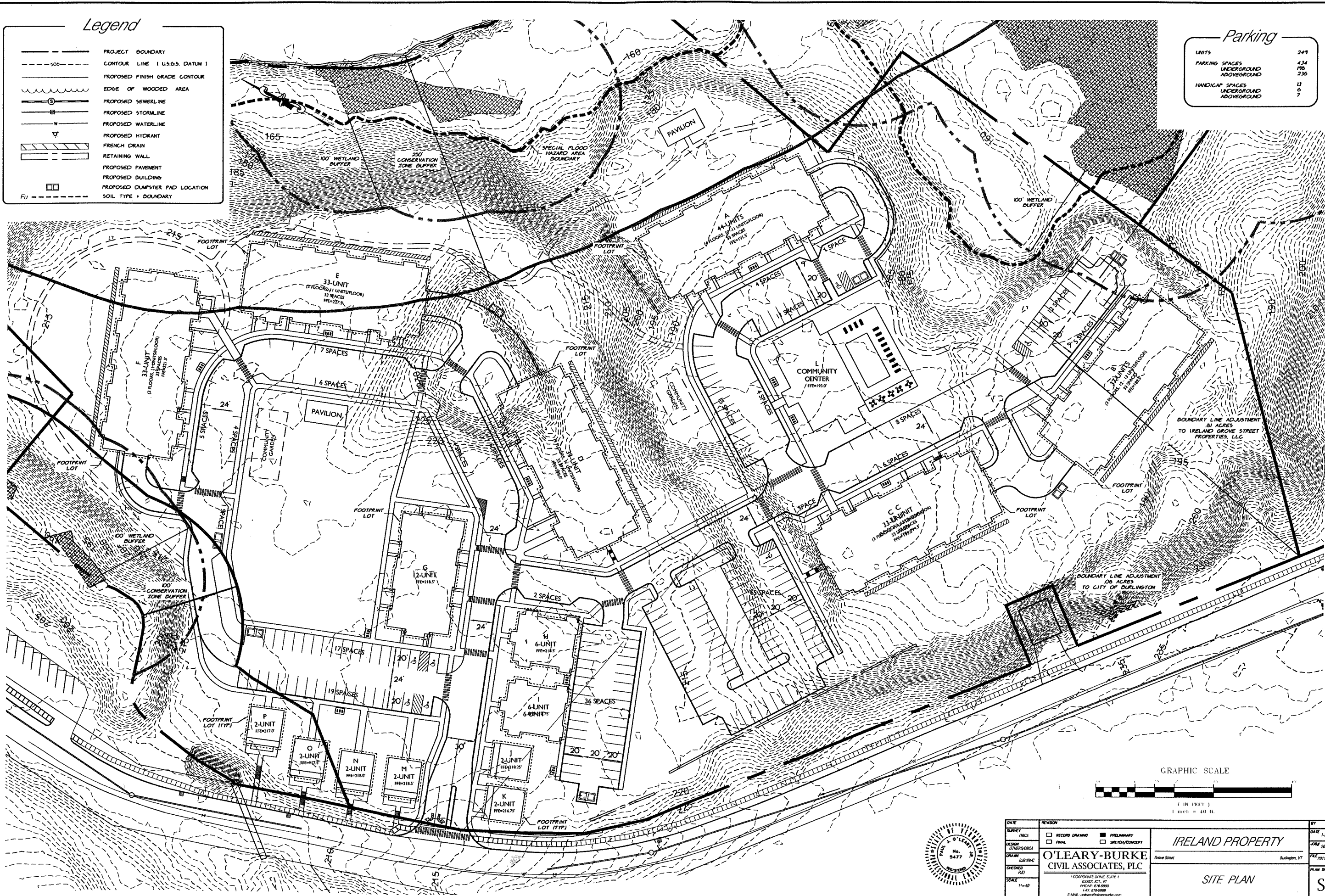






RECEIVED
FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING

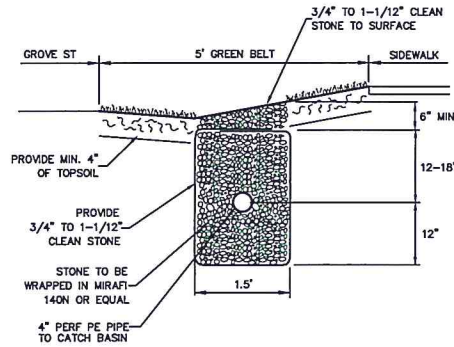




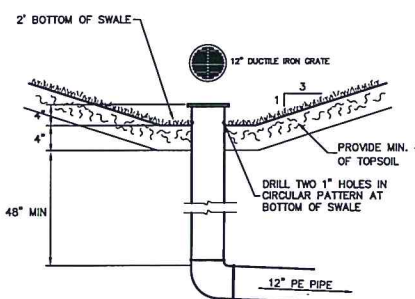
NOTE: MAINTAIN 2% SLOPE
THROUGHOUT HANDICAP PARKING
SPACE AND 5% MAX TO PARK
ACCESS RAMP

Legend

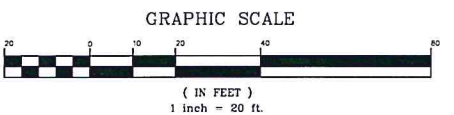
- PROJECT BOUNDARY
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- EDGE OF PAVEMENT
- PROPOSED STORMLINE
- WATERCOURSE
- PROPOSED FRENCH DRAIN



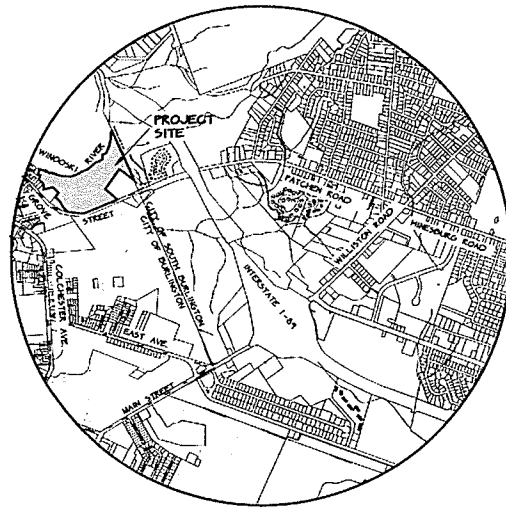
ROADSIDE FRENCH DRAIN
NTS



PARKING LOT
YARD DRAIN DETAIL
NTS

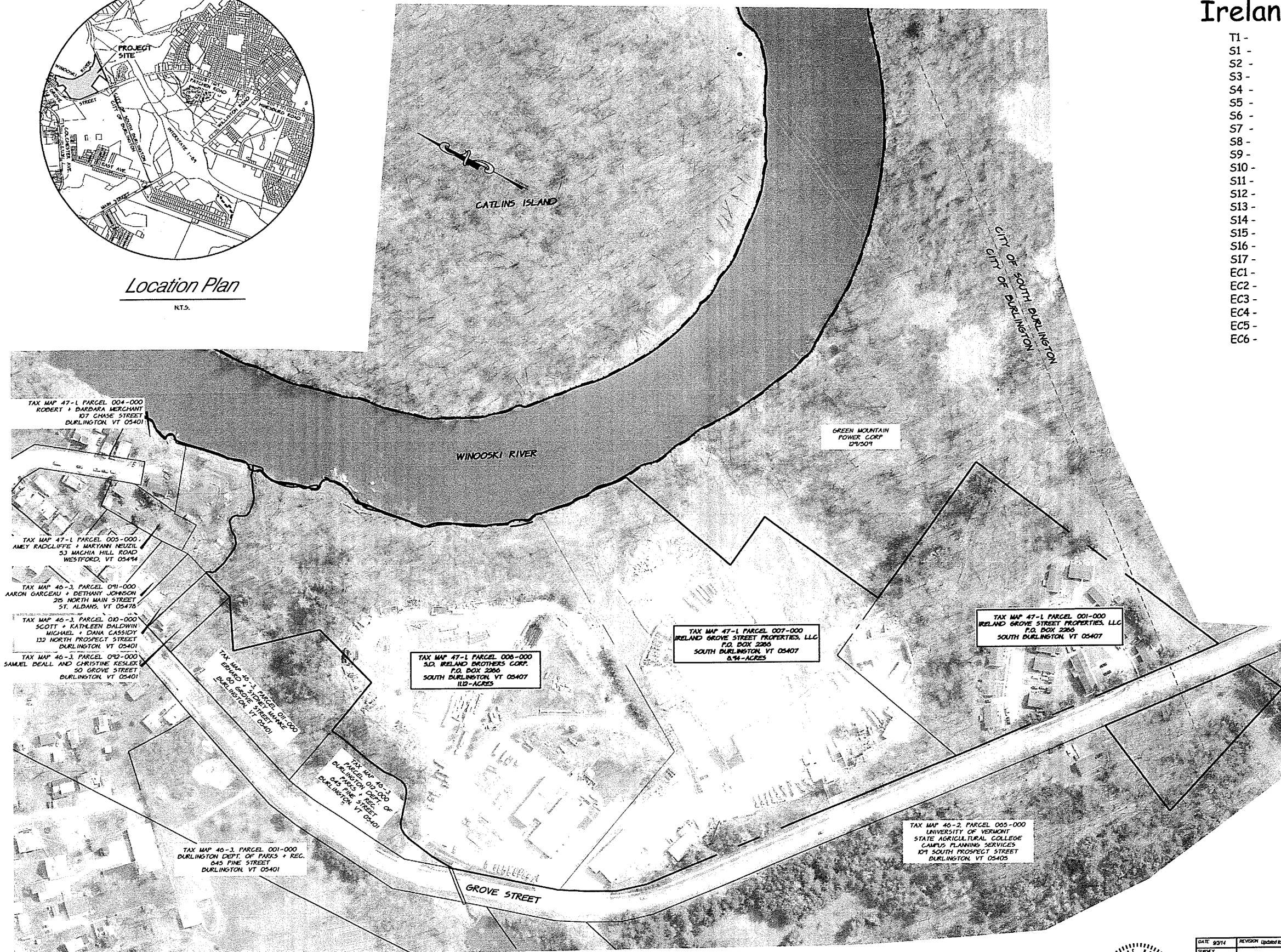


DATE: 9/3/14	REVISION: Updated for Final Submittal	BY: BYC
SURVEY: ZBCA	☐ RECORD DRAWING	DATE: 2-23-14
DESIGN: OTHERS/BCA	☒ FINAL	DATE: 2011-52
DRAWN: BLB/BYC	☐ SKETCH/CONCEPT	FILE: 2011-52-S9
CHECKED: PLO		PLAN SHEET #
SCALE: 1"=20'		
O'LEARY-BURKE CIVIL ASSOCIATES, PLLC 1 CORPORATE DRIVE, SUITE 1 BURLINGTON, VT 05401 PHONE: 878-9990 FAX: 878-9999 E-MAIL: o'b@oburke.com		IRELAND PROPERTY Burlington, VT
BURLINGTON PARKS AND REC IMPROVEMENTS		S8



Location Plan

NTS.



Ireland Property

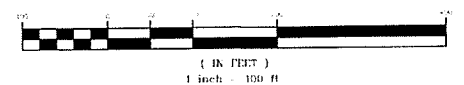
- T1 - Title Sheet
- S1 - Existing Conditions Plan
- S2 - Site Plan
- S3 - Utility Plan
- S4 - Grading Plan
- S5 - Pedestrian Plan 1
- S6 - Pedestrian Plan 2
- S7 - Pedestrian Plan 3
- S8 - Burlington Parks & Rec. Improvements
- S9 - Off-Site Water Line Extension
- S10 - Plan & Profile Upper Plateau
- S11 - Plan & Profile Transition
- S12 - Plan & Profile Lower Plateau
- S13 - Sewer Details
- S14 - Pump Station Details
- S15 - Parking Details
- S16 - Water Details
- S17 - Stormwater and Erosion Control Details
- EC1 - Erosion Control Pre-Construction Plan
- EC2 - Erosion Control Construction Phase I Plan
- EC3 - Erosion Control Construction Phase II Plan
- EC4 - Erosion Control Post-Construction Plan
- EC5 - Erosion Control Culvert Removal
- EC6 - Erosion Control Details

Owners & Applicants

S.D. IRELAND BROTHERS CORP.
C/O SCOTT IRELAND
P.O. BOX 2286
SOUTH BURLINGTON VERMONT 05407

IRELAND GROVE STREET PROPERTIES, LLC
C/O SCOTT IRELAND
P.O. BOX 2286
SOUTH BURLINGTON VERMONT 05407

GRAPHIC SCALE



Landscape Architect

WAGNER-HODGSON
C/O JEFF HODGSON, ASLA
7 MARBLE AVENUE
BURLINGTON VERMONT 05401

Civil Engineer

O'LEARY-BURKE CIVIL ASSOCIATES
C/O PAUL O'LEARY, PE
1 CORPORATE DRIVE
ESSEX JCT VERMONT 05452



DATE: 9/24	REVISION: Updated by Final Submittal	BY: BWC
SURVEY: OBCA	☐ RECORD DRAWING ☐ PRELIMINARY	DATE: 7-23-14
DESIGN: OTHERS/OBCA	☒ FINAL ☐ SKETCH/CONCEPT	JOB: 2011-52
DRAWN: B.B.P.W.C.	O'LEARY-BURKE CIVIL ASSOCIATES, P.C.	
CHECKED: P.W.	1 CORPORATE DRIVE, SUITE 1 ESSEX JCT, VT PHONE: 878-1000 FAX: 878-8888 E-MAIL: o'b@oleary-burke.com	
SCALE: 1"=100'	IRELAND PROPERTY	
TITLE SHEET		PLAN SHEET # T1

Legend

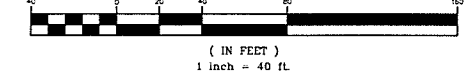
- PROJECT BOUNDARY
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- PROPOSED MAIL BOX CLUSTER
- PROPOSED SPLIT RAIL FENCE
- GRASSED SWALE WITH UNDERDRAIN
- RETAINING WALL
- PROPOSED PAVEMENT
- PROPOSED BUILDING
- PROPOSED DUMPSTER PAD LOCATION
- SOIL TYPE + BOUNDARY
- PROPOSED PATH
- HVAC PAD
- FOOTPRINT LOT
- BIKE RACK

Parking

UNITS	232
PARKING SPACES	354
UNDERGROUND	164
ABOVEGROUND	230
HANDICAP SPACES	17
UNDERGROUND	6
ABOVEGROUND	11



GRAPHIC SCALE



DATE: 9/2/14	REVISION: Updated for Final Submission	BY: SWC
SURVEY: DBCA	DESIGN: DBCA	DATE: 7-25-14
OTHERS/DBCA	DESIGN: DBCA	DATE: 2011-52
DRAWN: JLB/RWC	CHECKED: FJD	FILE: 2011-52-S0
SCALE: 1"=40'	PLAN SHEET #	

O'LEARY-BURKE
CIVIL ASSOCIATES, PLC

1 CORPORATE DRIVE, SUITE 1
ESSEX, VT 05732
PHONE: 878-8880
FAX: 878-8880
E-MAIL: o'b@obciv.com

IRELAND PROPERTY

Grove Street
Burlington, VT

SITE PLAN

S2

Legend

- PROJECT BOUNDARY
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- PROPOSED SEWERLINE
- PROPOSED STORMLINE
- PROPOSED WATERLINE
- PROPOSED HYDRANT
- GRASSED SWALE WITH UNDERDRAIN
- RETAINING WALL
- PROPOSED PAVEMENT
- PROPOSED BUILDING
- PROPOSED DUMPSTER PAD LOCATION
- SOIL TYPE + BOUNDARY
- PROPOSED PATH
- TRANSFORMER PAD

Units			
Service Pipe	21-44	6	2
SDR35 PVC Sewer Service	6 in	6 in	6 in
CD900 PVC Water Service	8 in	1 1/2 in (CU)	1 in

Note: Any parking garage drainage is to be connected to an oil/grit separator and discharge to the sanitary sewer.

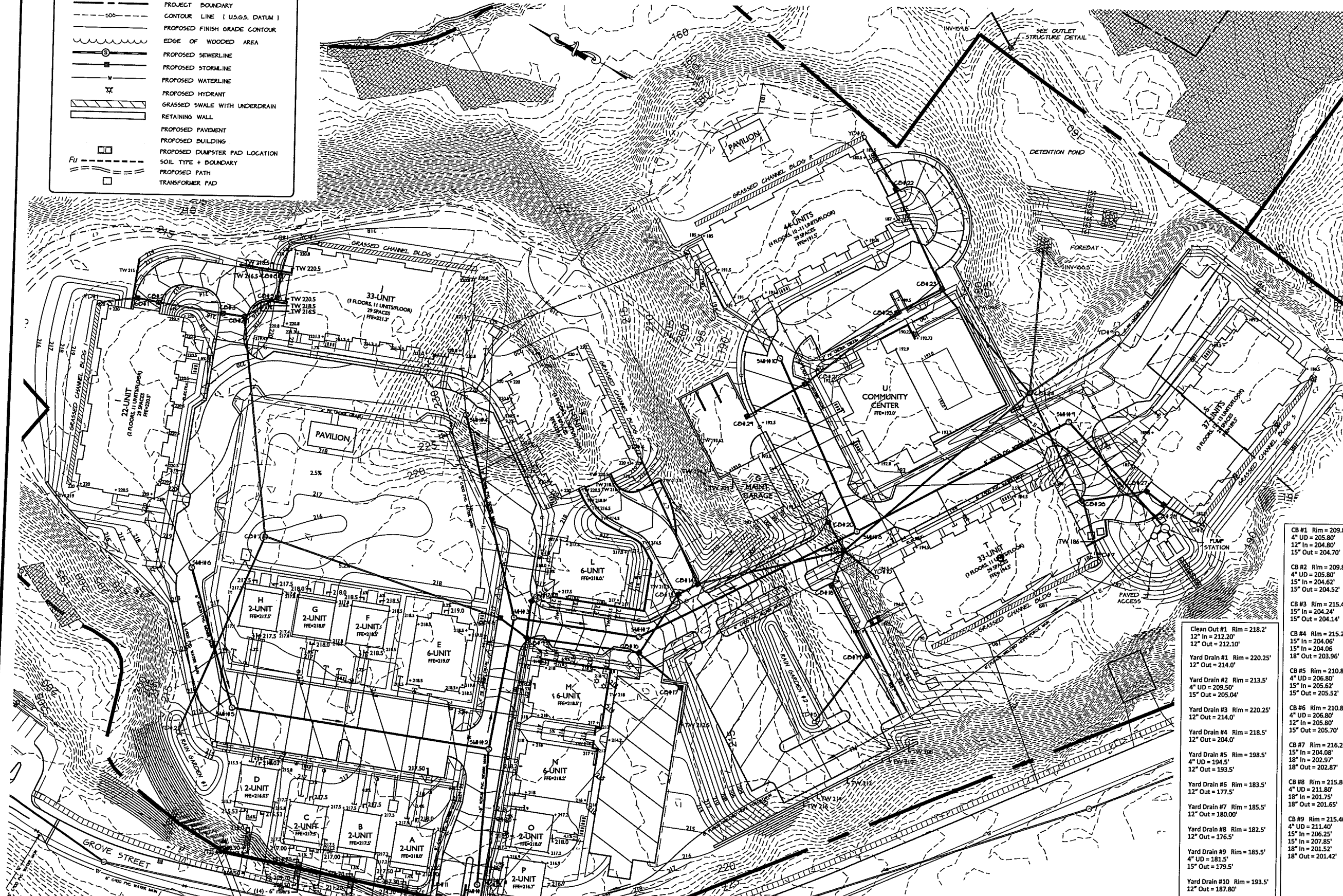
Sewer Infrastructure

- SMH #1 Rim = 215.5'
8" Out = 206.5'
- SMH #2 Rim = 218.96'
8" Out = 205.75'
8" In = 205.85'
8" In = 205.85'
- SMH #3 Rim = 215.85'
8" Out = 205.07'
8" In = 205.17'
8" In = 205.17'
- SMH #4 Rim = 219.15'
8" Out = 210.15'
- SMH #5 Rim = 215.15'
8" Out = 207.00'
8" In = 207.10'
- SMH #6 Rim = 217.91'
8" Out = 207.74'
- SMH #7 Rim = 210.66'
8" Out = 198.77'
8" In = 198.87'
- SMH #8 Rim = 194.76'
8" Out = 182.29'
8" In = 182.39'
- SMH #9 Rim = 189.75'
8" Out = 180.83'
8" In = 180.93'
- SMH #10 Rim = 190.78'
8" Out = 184.17'

Stormwater Infrastructure

- CB #1 Rim = 209.80'
4" UD = 205.80'
12" In = 204.80'
15" Out = 204.70'
- CB #2 Rim = 209.80'
4" UD = 205.80'
12" In = 204.80'
15" Out = 204.70'
- CB #3 Rim = 215.40'
4" UD = 202.90'
15" In = 204.14'
15" Out = 204.14'
- CB #4 Rim = 215.20'
4" UD = 202.90'
15" In = 204.06'
15" Out = 203.96'
- CB #5 Rim = 210.80'
4" UD = 209.50'
15" In = 205.62'
15" Out = 205.04'
- CB #6 Rim = 210.80'
4" UD = 206.80'
12" In = 205.80'
15" Out = 205.70'
- CB #7 Rim = 216.2'
15" In = 204.08'
18" In = 202.97'
18" Out = 202.87'
- CB #8 Rim = 215.80'
4" UD = 211.80'
18" In = 201.75'
18" Out = 201.65'
- CB #9 Rim = 215.40'
4" UD = 211.40'
15" In = 206.25'
15" In = 207.85'
18" In = 201.52'
18" Out = 201.42'
- CB #10 Rim = 215.00'
4" UD = 211.00'
15" In = 207.60'
15" Out = 207.50'
- CB #11 Rim = 214.7'
4" UD = 210.70'
15" In = 204.62'
15" Out = 204.52'
- CB #12 Rim = 215.50'
4" UD = 202.90'
15" In = 204.24'
15" Out = 204.14'
- CB #13 Rim = 206.90'
4" UD = 202.90'
18" In = 199.32'
18" Out = 199.22'
- CB #14 Rim = 206.50'
4" UD = 202.50'
18" In = 199.14'
18" In = 199.14'
- CB #15 Rim = 195.19'
4" UD = 191.19'
12" In = 187.60'
18" In = 187.60'
- CB #16 Rim = 210.70'
4" UD = 206.70'
15" In = 200.92'
15" In = 201.50'
- CB #17 Rim = 210.75'
4" UD = 206.75'
15" In = 201.65'
18" In = 197.65'
- CB #18 Rim = 197.65'
4" UD = 193.65'
18" In = 190.25'
18" Out = 190.15'
- CB #19 Rim = 197.82'
4" UD = 193.82'
12" In = 190.69'
15" Out = 190.59'
- CB #20 Rim = 195.00'
4" UD = 191.00'
15" In = 187.85'
15" Out = 187.85'
- CB #21 Rim = 190.90'
4" UD = 186.90'
15" In = 185.98'
15" Out = 184.01'
- CB #22 Rim = 180.85'
4" UD = 176.85'
12" In = 175.85'
15" Out = 175.75'
- CB #23 Rim = 188.80'
4" UD = 184.80'
15" In = 175.27'
15" In = 175.27'
- CB #24 Rim = 187.60'
4" UD = 173.60'
18" In = 174.56'
18" In = 172.80'
- CB #25 Rim = 188.75'
4" UD = 184.75'
15" In = 177.89'
15" Out = 177.79'
- CB #26 Rim = 184.00'
4" UD = 180.00'
15" In = 173.44'
12" In = 176.50'
- CB #27 Rim = 179.00'
4" UD = 175.00'
15" In = 173.82'
15" Out = 173.34'
- CB #28 Rim = 179.00'
4" UD = 175.00'
12" In = 174.00'
15" Out = 173.90'
- CB #29 Rim = 192.30'
15" Out = 186.30'

- Clean Out #1 Rim = 218.2'
12" In = 212.20'
12" Out = 212.10'
- Yard Drain #1 Rim = 220.25'
12" Out = 214.0'
- Yard Drain #2 Rim = 213.5'
4" UD = 209.50'
15" In = 205.62'
15" Out = 205.04'
- Yard Drain #3 Rim = 220.25'
12" Out = 214.0'
- Yard Drain #4 Rim = 218.5'
12" Out = 204.0'
- Yard Drain #5 Rim = 198.5'
4" In = 194.5'
12" Out = 193.5'
- Yard Drain #6 Rim = 183.5'
12" Out = 177.5'
- Yard Drain #7 Rim = 185.5'
12" Out = 180.00'
- Yard Drain #8 Rim = 182.5'
12" Out = 176.5'
- Yard Drain #9 Rim = 185.5'
4" UD = 181.5'
15" Out = 179.5'
- Yard Drain #10 Rim = 193.5'
12" Out = 187.80'



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

REVISION

DATE: 9/21/14	REVISION: Updated for Final Submittal
SURVEY: OLC	RECORD DRAWING: []
DESIGN: OLC	PRELIMINARY: []
CHECKED: PJO	SKETCH/CONCEPT: []

O'LEARY-BURKE CIVIL ASSOCIATES, PLC

1 CORPORATE DRIVE, SUITE 1
DORSET, VT 05834
PHONE: 879-3800
FAX: 879-3800
E-MAIL: o'b@obciv.com

IRILEAD PROPERTY

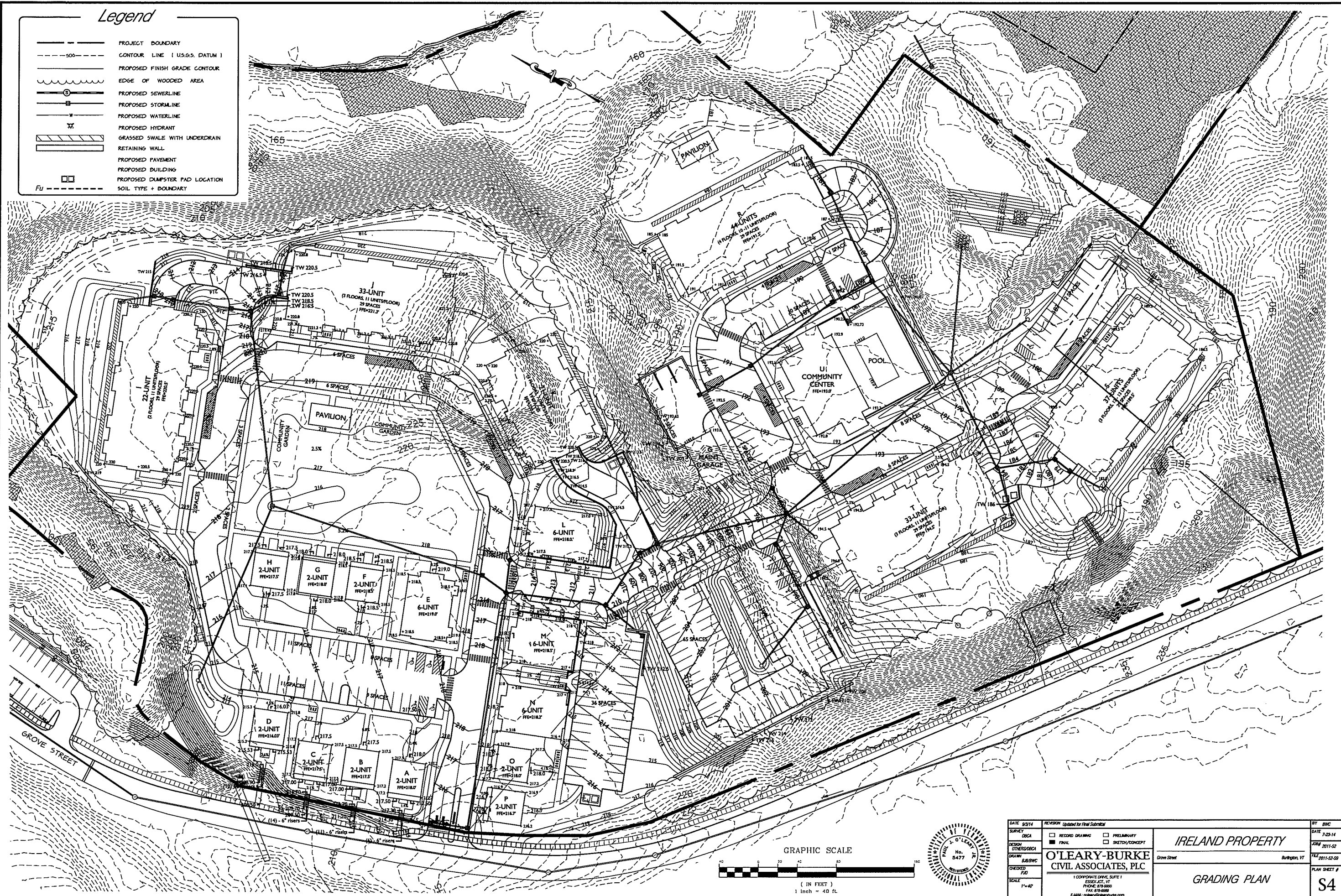
Grove Street
Burke, VT 05834

UTILITY PLAN

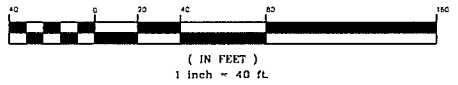
DATE: 7-23-14
JOB: 2011-02-09
PLAN SHEET: S3

Legend

- PROJECT BOUNDARY
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- PROPOSED SEWERLINE
- PROPOSED STORMLINE
- PROPOSED WATERLINE
- PROPOSED HYDRANT
- GRASSED SWALE WITH UNDERDRAIN
- RETAINING WALL
- PROPOSED PAVEMENT
- PROPOSED BUILDING
- PROPOSED CHAMPSTER PAD LOCATION
- SOIL TYPE + BOUNDARY



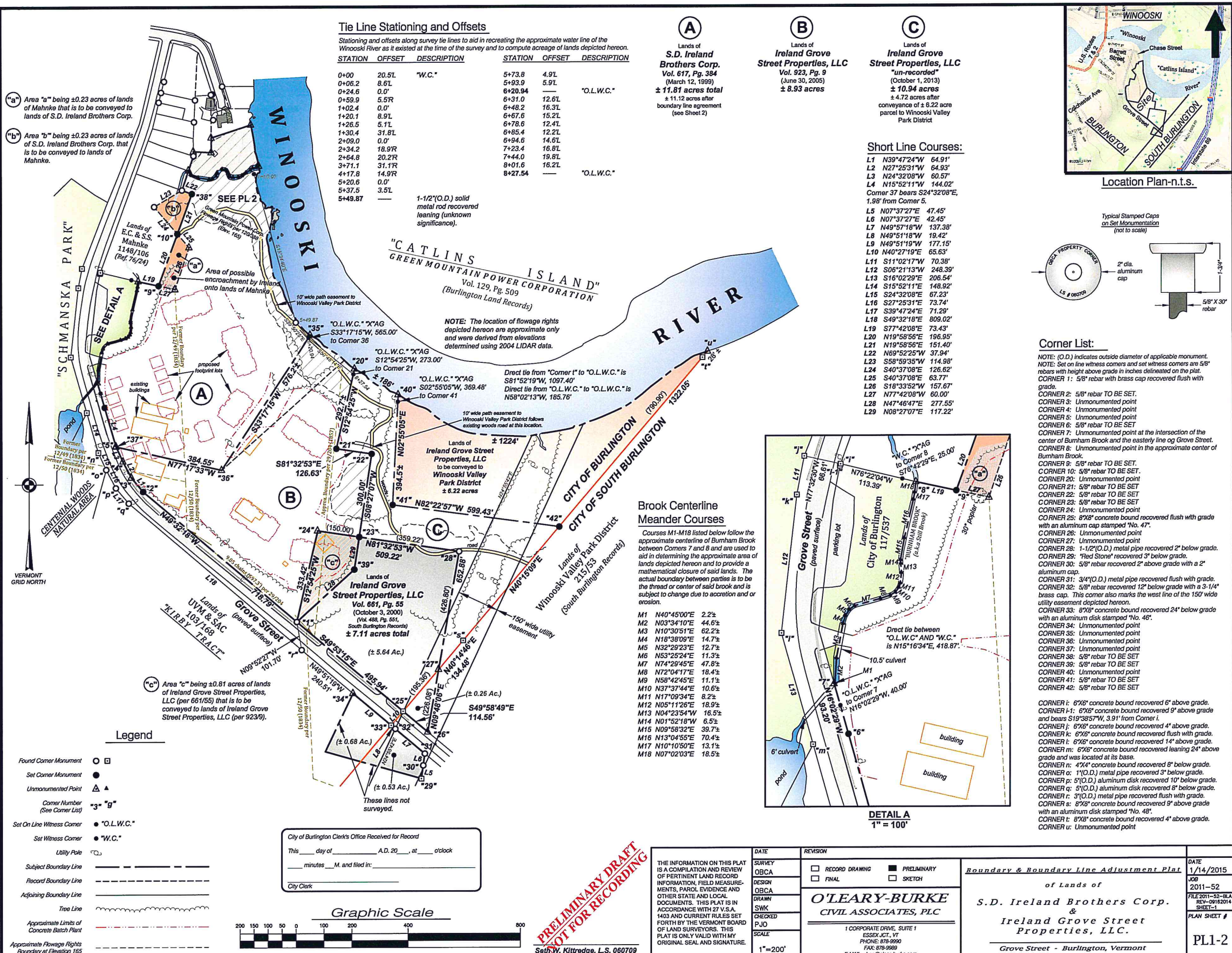
GRAPHIC SCALE



DATE: 9/2/14	REVISION: Updated for Final Submit
SURVEY: OBCA	RECORD DRAWING
DESIGN: OTHERS/DOCA	PRELIMINARY
DRAWN: BJB/BWC	FINAL
CHECKED: PJO	SKETCH/CONCEPT
SCALE: 1"=40'	

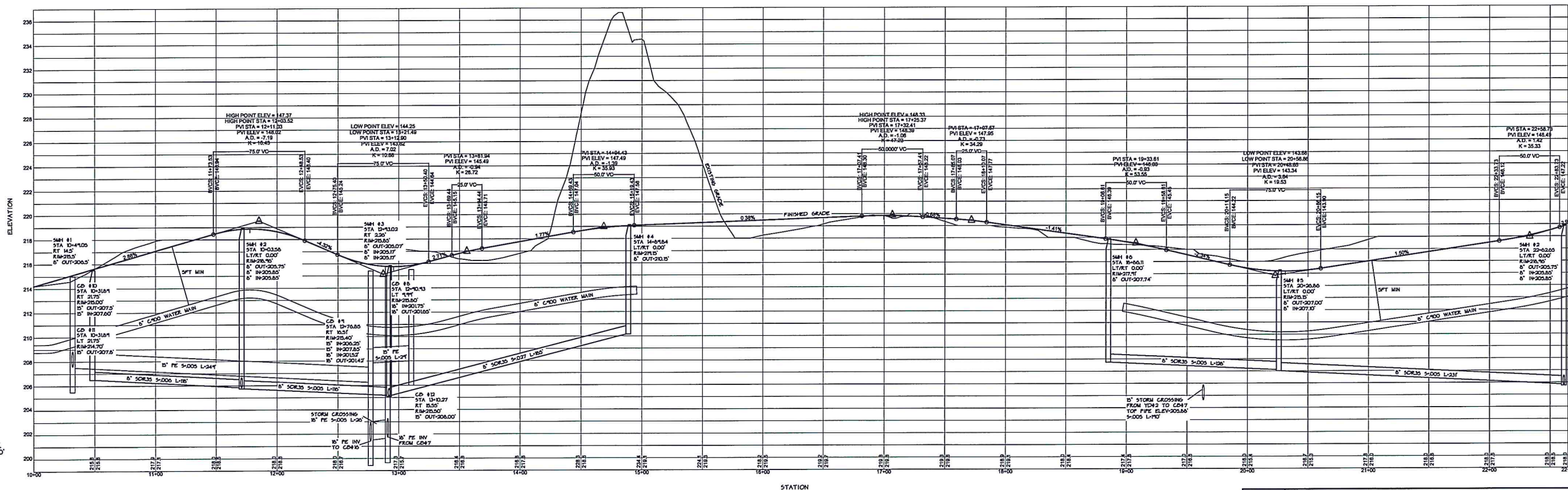
O'LEARY-BURKE CIVIL ASSOCIATES, PLC		IRELAND PROPERTY	
1 CORPORATE DRIVE, SUITE 1 ESSEX, VT 05732 PHONE: 878-8880 FAX: 878-8880 E-MAIL: o'b@obcplc.com		Burlington, VT	
GRADING PLAN		PLAN SHEET #	
		S4	

THIS IS AN ORIGINAL MYLAR



Legend

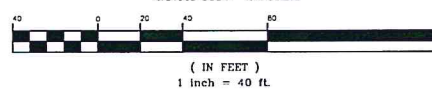
- PROJECT BOUNDARY
- - - - - CONTOUR LINE (U.S.G.S. DATUM)
- - - - - PROPOSED FINISH GRADE CONTOUR
- ~~~~~ EDGE OF WOODED AREA
- (S)--- PROPOSED SEWERLINE
- (W)--- PROPOSED STORMLINE
- (W)--- PROPOSED WATERLINE
- (H)--- PROPOSED HYDRANT
- ===== GRASSSED SWALE WITH UNDERDRAIN
- ===== RETAINING WALL
- ===== PROPOSED PAVEMENT
- ===== PROPOSED BUILDING
- ===== PROPOSED DUMPSTER PAD LOCATION
- FU --- SOIL TYPE + BOUNDARY



PROFILE SCALE
HORIZONTAL 1"=40'
VERTICAL 1"=4'

STATION

GRAPHIC SCALE



DATE	REVISION
9/3/14	Updated for Final Submittal
SURVEY	RECORD DRAWING
DESIGN	PRELIMINARY
DRAWN	SKETCH/CONCEPT
CHECKED	
SCALE	
1"=40'	

O'LEARY-BURKE
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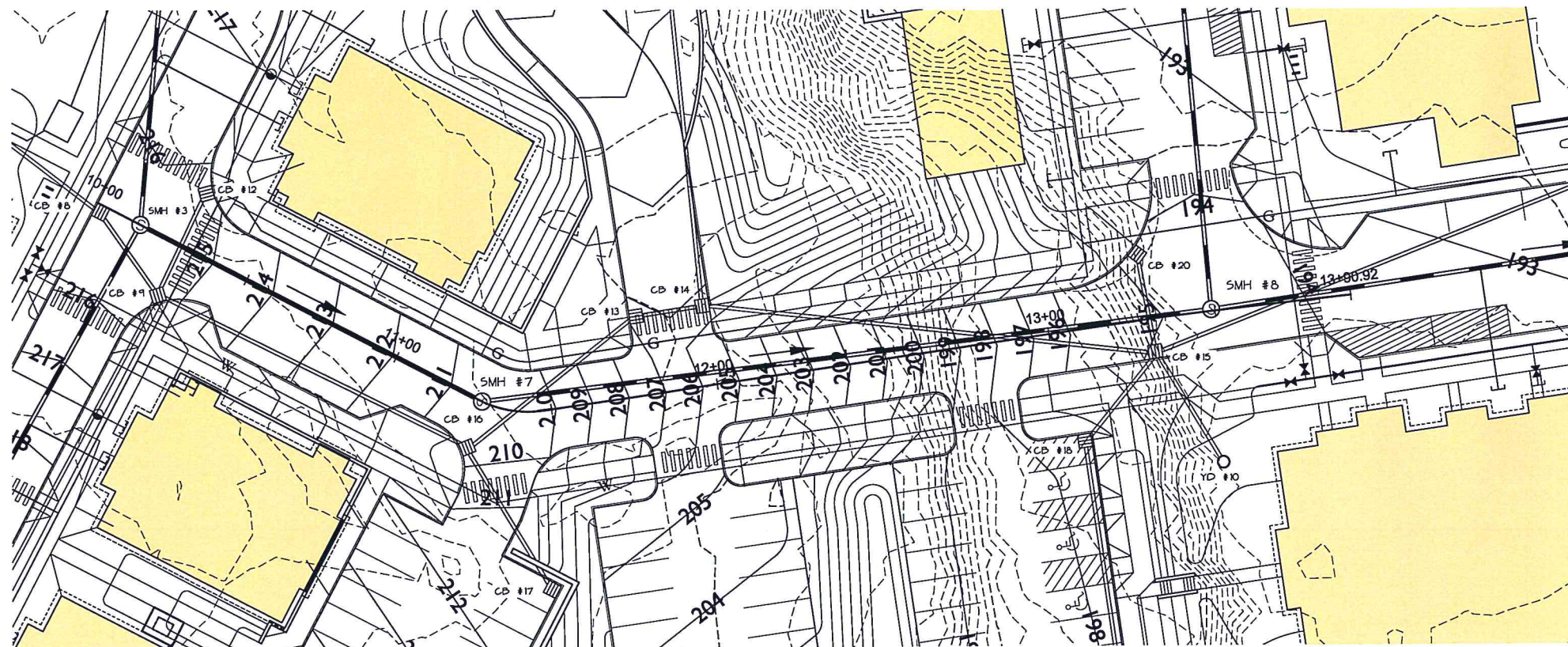
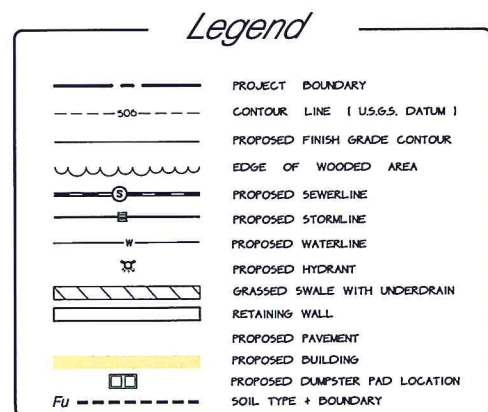
IRELAND PROPERTY

Grove Street

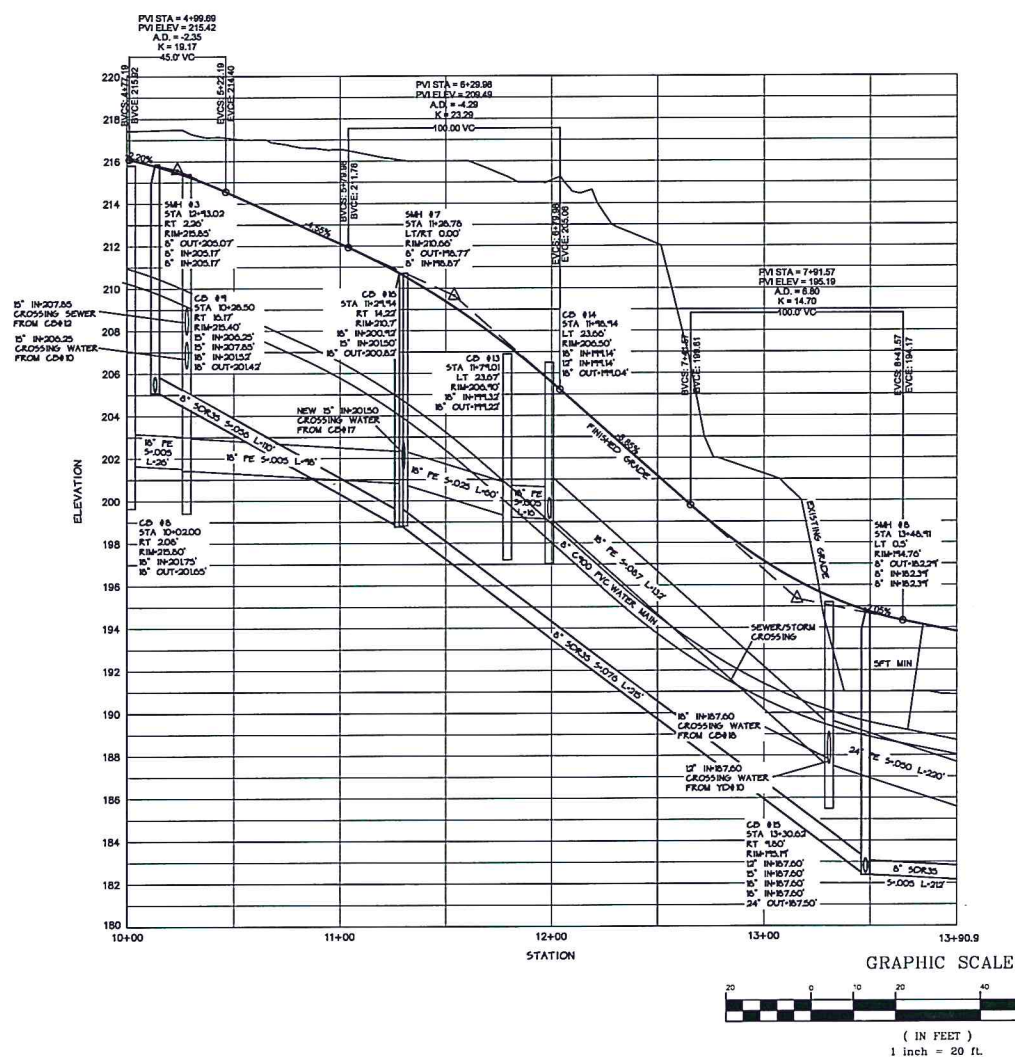
Burlington, VT

SEWER PLAN & PROFILE

BY: BWC
DATE: 7-23-2011
JOB: 2011-03
FILE: 2011-03
PLAN SHEET: S1



PROFILE SCALE
HORIZONTAL 1"=40'
VERTICAL 1"=4'



DATE: 9/3/14	REVISION: Updated for Final Submittal	BY: BHC
SURVEY: ORCA	RECORD DRAWING	DATE: 7-23-2011
DESIGN: OTHERS/BCA	FINAL	JOB# 2011-02
DRAWN: BLS/BHC	PRELIMINARY	PLAN SHEET
CHECKED: FLD	SKETCH/CONCEPT	
SCALE: 1"=20'		
O'LEARY-BURKE CIVIL ASSOCIATES, PLC 1 CORPORATE DRIVE, SUITE 1 ESSSEX, VT, VT PHONE: 878-8860 FAX: 878-8860 E-MAIL: poburke@olearyburke.com		
IRELAND PROPERTY Grove Street Burlington, VT		PLAN SHEET S1

SEWAGE FLOWS:

THE SEWAGE FLOWS ARE BASED ON THE STATE OF VERMONT - ENVIRONMENTAL PROTECTION RULES, WHICH REQUIRE 210 GAL/DAY/RESIDENTIAL UNIT REGARDLESS OF THE NUMBER OF BEDROOMS (SINGLE BEDROOMS REQUIRE 140 GAL/DAY/RESIDENTIAL UNIT) WHEN CONNECTING TO A MUNICIPAL SEWER SYSTEM WITH > 50,000 GAL/DAY CAPACITY.

PUMP STATION FLOWS

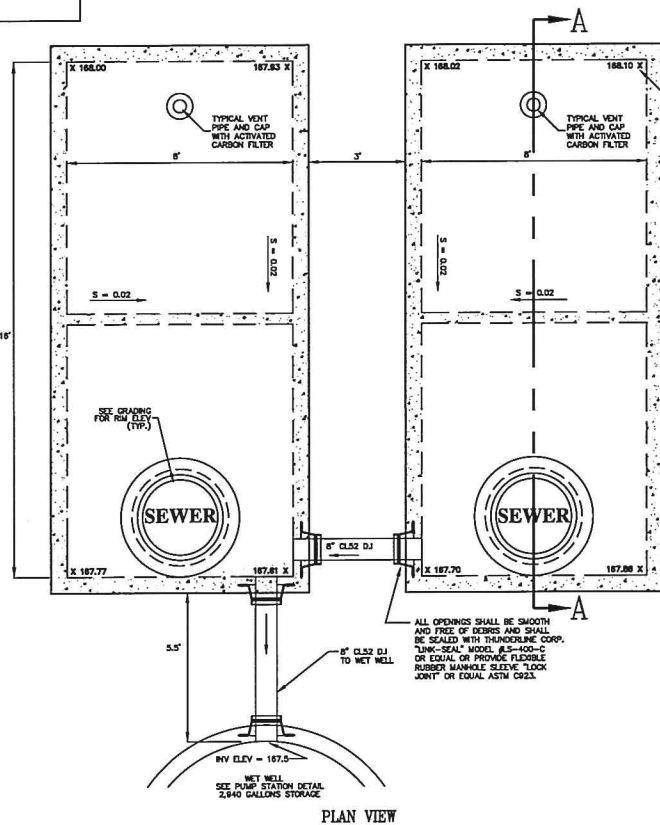
232 TOTAL UNITS (66% ONE BEDROOM UNITS)
54 SINGLE BEDROOM UNITS X 140 GAL/DAY/UNIT = 7,560 GAL/DAY
78 TWO BEDROOM UNITS X 210 GAL/DAY/UNIT = 16,380 GAL/DAY
1 COMMUNITY CENTER
100 USERS X 5 GAL/DAY/USER = 500 GAL/DAY
1 MAINTENANCE GARAGE
2 WORKERS X 50 GAL/DAY/WORKER = 100 GAL/DAY
INFILTRATION: 300 GAL/INCH/MILE/DAY X
16" PIPE X (6,000 LF /
5,280'/MILE) = 728 GAL/DAY
TOTAL: 39,268 GAL/DAY
39,268 GAL/DAY > 2,000 GAL/DAY
THEREFORE A DUAL PUMP STATION IS REQUIRED.

PUMP STATION DATA

- A. DAILY FLOW = 39,268 GPD (SEE SEWAGE FLOW INFORMATION ABOVE)
B. AVERAGE DAILY FLOW (ADF) = 39,268 GPD
18 HR/DAY = 60 MIN/HR = 40.9 GPM
MINIMUM PUMPING RATE = 5 TIMES THE ADF (205 GPM) OR THE
MINIMUM PUMPING RATE FOR A 6" FM (183 GPM)
USE A PUMPING RATE OF 212 GPM
C. HEAD LOSSES: ELEVATION HEAD = 48 FT
FRICTION LOSSES (6" LINE) = 3.0 FT
RES. LOSSES = 5 FT
TOTAL DYNAMIC HEAD: 57 FT
D. PUMP REQUIREMENTS - 2 PUMPS EACH CAPABLE OF PUMPING A
MINIMUM OF 205 GPM AT 57 TCH
THREE PHASE, MINIMUM 4" DISCHARGE, CAPABLE
OF PUMPING MINIMUM 3" SOLIDS. PUMPS
SHALL BE ENFO/CORNEILL, MEYERS, HYDROMATIC
OR AN APPROVED EQUAL
E. CONTROLS: NEMA 4 DUPLEX UL LISTED CONTROL PANEL; SIEMENS/EVOQUA LC150 DUPLEX
PUMP CONTROLLER WITH 1000 PSI PRESSURE TRANSDUCER AND BACKUP FLOAT;
AUTOMATIC PUMP ALTERNATOR; 115 VAC CONTROL CIRCUIT; 115 VAC ALARM
LIGHT AND HORN MOUNTED ON TOP OF PANEL; PHASE MONITOR IF THREE PHASE
PUMPS ARE USED; 115 VAC DUPLEX CONVENIENCE OUTLET; PANEL HEATER WITH
THERMOSTAT; INDIVIDUAL CIRCUIT BREAKERS FOR EACH PUMP, CONTROL CIRCUIT,
DUPLEX OUTLET, TRANSFORMER IF REQUIRED, HEATER, AND ONE SPARE;
INDIVIDUAL ELAPSED TIME METERS MOUNTED. ALL ELECTRIC WIRING
SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.
CONTROLS SHALL BE SCADA COMPATIBLE
CONTROL PANEL SHALL INCLUDE AN AUXILIARY POWER HOOKUP FOR FUTURE
GENERATOR
PUBLIC PUMP STATIONS WILL BE EQUIPPED WITH TELEMETRY SYSTEM WITH
BATTERY BACK-UP, TIED TO THE BURLINGTON SYSTEM
A MISSION COMMUNICATIONS M-800 REAL TIME MONITORING SYSTEM BE INSTALLED
WIRED TO TEMPORARILY DISABLE THE PUMP STATION WHEN A SIGNAL IS RECEIVED
FROM CSO MANHOLE R112 ON COLCHESTER AVE. WITH ITS BUILT IN DIGITAL AND
ANALOG INPUTS, AND WET WELL LEVEL, PUMP STATUS/RUNTIMES, HIGH AND LOW
WET WELL ALARMS, AND POWER FAILURE
F. FLOATS: PRIMARY PRESSURE TRANSDUCER WATER LEVEL CONTROLLER WITH EMERGENCY
FLOAT BACK-UP TO BE COMPLETELY SEALED, MADE OF CORROSION RESISTANT
SOLUTION, ELECTRICAL CABLE TO BE FLEXIBLE TWO CONDUCTOR WITH
NEOPRENE JACKET.
G. EMERGENCY STORAGE
39,268 GPD
18 HR/DAY X 4 HR = 9,817 GAL
TWO CONCRETE 4,500 GAL STORAGE TANKS AND 2,940 GAL CAPACITY IN PUMP STATION
H. SUBMITTALS REQUIRED: PUMPS, ACCESS LID, WETWELL, VALVE PIT,
FLOATS AND FLOAT HANGER BRACKET, CHECK VALVES, GATE
VALVES, SOLID SLEEVE COUPLINGS, AND OPERATION AND
MAINTENANCE MANUALS.

TANK SPECIFICATIONS

- A) THE STRUCTURE PROVIDED FOR EMERGENCY STORAGE FOR THE PUMPING
STATION SHALL BE TWO 4,500 GALLON, STEEL REINFORCED, 5000 PSI PRECAST
CONCRETE HOLDING TANK STRUCTURE. THE STRUCTURE SHALL BE DESIGNED
BY AN ENGINEER LICENSED IN THE STATE OF VERMONT TO WITHSTAND
AASHTO H-20 WHEEL LOADINGS AT THE DEPTH SHOWN ON THIS PLAN
B) INSIDE TANK DIMENSIONS SHALL BE 16' X 8' X 8' HIGH
C) EXTERNALLY COAT ALL CONCRETE STRUCTURES WITH TWO COATS OF
BITUMINOUS WATERPROOFING AND TEST FOR WATER-TIGHTNESS. SEE
SHEET 213 FOR STRUCTURES TESTING SPECIFICATIONS
D) ALL BACKFILL MATERIAL AROUND THE TANK SHALL BE GRANULAR
MATERIAL THOROUGHLY COMPACTED TO NOT LESS THAN 95%
MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-99
STANDARD PROCTOR
E) BACKFILL SIDES AND TOP OF TANK WITH SAND AND/OR GRAVEL
F) PRIOR TO CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE
TOWN
G) THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH
"AS-BUILT" INFORMATION AND CERTIFICATION THAT THE SYSTEM WAS
INSTALLED IN ACCORDANCE WITH PLANS AND ALL PERTINENT APPROVALS
AND PERMITS ISSUED FOR THE PROJECT
H) THE CONTRACTOR SHALL ERECT AND MAINTAIN A CONTINUOUS SHOW
FENCE BARRIER AND LIGHTED BARRICADES AROUND ALL EXCAVATION LEFT
OVER NIGHT OR ON WEEKENDS.



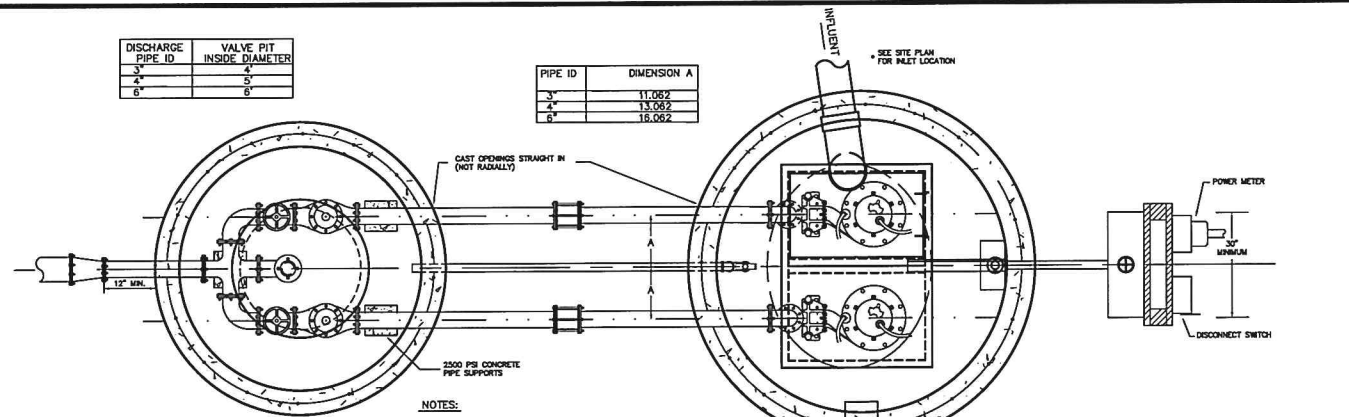
STORAGE TANKS

TESTING DATA

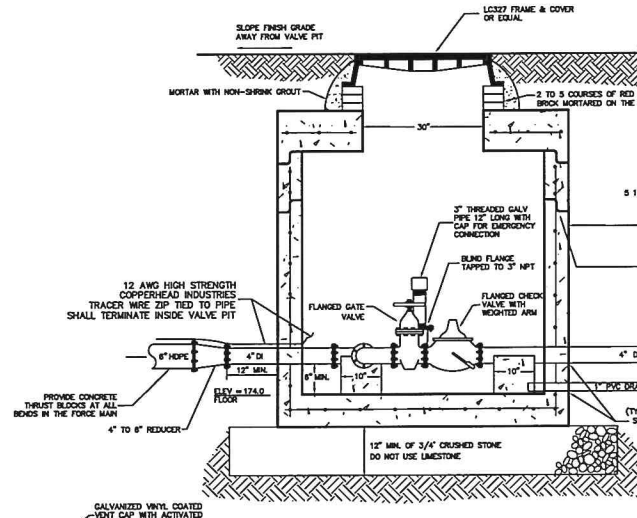
- A. FORCE MAIN PRESSURE TEST: ALL FORCE MAINS SHALL BE PRESSURE TESTED TO NOT
LESS THAN 50 PSI AT THE HIGHEST POINT OF THE TEST
SECTION. THE TEST SHALL BE OF A TWO HOUR DURATION
AND THE TEST PRESSURE SHALL NOT VARY BY MORE THAN
+/- 5 PSI. A LEAKAGE TEST SHALL BE PERFORMED
CONCURRENTLY WITH THE PRESSURE TEST. THE ALLOWABLE
LEAKAGE SHALL BE DETERMINED BY THE FOLLOWING
FORMULA:
 $L = \frac{ND}{7400}$
WHERE L = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR,
N IS THE NUMBER OF JOINTS, D IS THE NOMINAL
DIAMETER OF THE PIPE IN INCHES, AND P IS THE AVERAGE
TEST PRESSURE IN PSI.
B. VALVE PIT AND PUMP
STATION TEST:
THE STRUCTURES SHALL BE TESTED IN THE PRESENCE OF
THE ENGINEER FOR EXFILTRATION BY FILLING THE STRUCTURES
TO 1' BELOW THE ACCESS LID. A STABILIZATION PERIOD OF
1 HR SHALL BE PROVIDED TO ALLOW FOR ABSORPTION. AT
THE END OF THE STABILIZATION PERIOD THE STRUCTURES
SHALL BE REFILLED IF NECESSARY AND THE TEST PERIOD OF
48 HOURS SHALL BEGIN. AT THE END OF THE TEST PERIOD,
THE VOLUME OF WATER CHANGE SHALL BE MEASURED.
THERE SHALL BE NO VISIBLE OR MEASURABLE EXFILTRATION
OR INFILTRATION OR THE TEST FAILS. IF THE TEST FAILS,
THE CONTRACTOR SHALL REPAIR OR WATERPROOF AND
RETEST.
C. PUMP STATION: AN AUTHORIZED REPRESENTATIVE OF THE PUMP MANUFACTURER OR AN
ELECTRICIAN FAMILIAR WITH THE OPERATION AND SETTING OF THE PUMP
STATION SHALL BE PRESENT DURING STARTUP. AMPERAGE READINGS ON
EACH MOTOR LEAD SHALL BE MEASURED AND RECORDED. THE CONTRACTOR
SHALL PROVIDE A WATER SOURCE TO PERFORM A FULL OPERATIONAL CHECK
OF THE STATION INCLUDING ALL FLOAT FUNCTIONS, ALARM TESTING,
INDICATOR LIGHTS, H-O-A SWITCHES, PUMP ALTERNATOR AND PHASE
MONITOR IF THREE-PHASE PUMPS ARE USED. THE CONTROL SYSTEM SHALL
BE CYCLED THROUGH MORE THAN ONCE TO INSURE PROPER SEQUENCING
AND OPERATION OF THE PUMPS. EACH PUMP SHALL BE FIELD TESTED
TO INSURE THE PUMPING CAPACITY MEETS THE PROJECT REQUIREMENTS.

DISCHARGE PIPE ID	VALVE PIT INSIDE DIAMETER
3"	4"
4"	5"
6"	8"

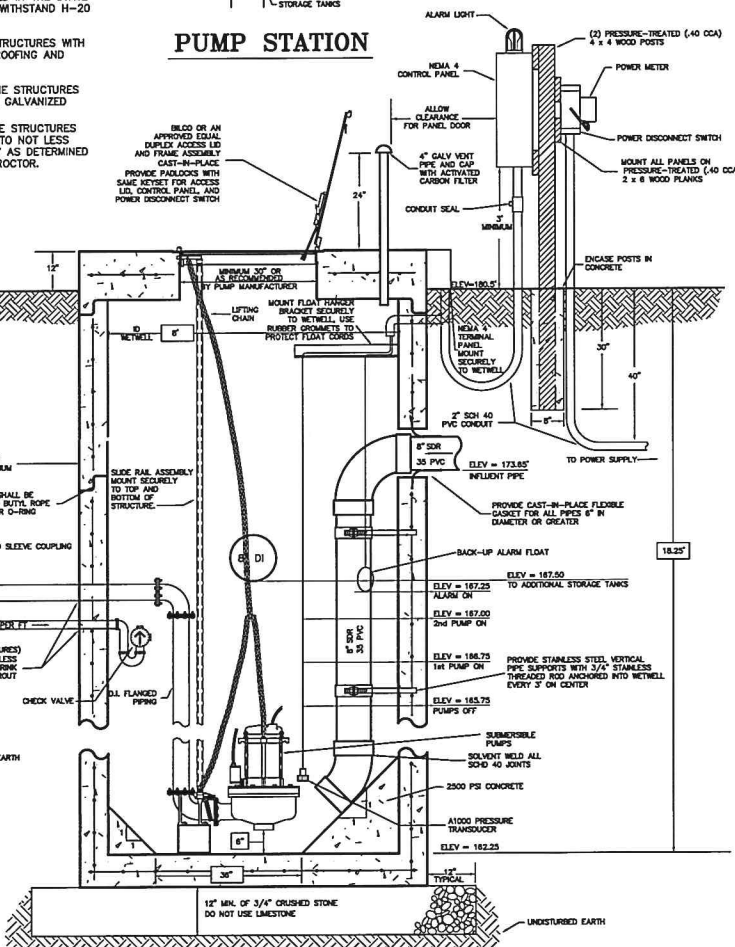
PIPE ID	DIMENSION A
3"	11.062
4"	13.062
6"	15.062



VALVE PIT



PUMP STATION



- NOTES:
1. CONCRETE SHALL BE 5000 PSI AFTER 28 DAYS.
2. SEE SITE PLAN FOR FINAL GRADING
3. THE CONTRACTOR SHALL SET THE STONE AND
RAISE THE TOP TO PREPARE A SLOPED BASE
FOR SETTING THE TANKS WITH A 0.02 FT/FT
SLOPE AND ELEVATIONS AS SHOWN.

DATE: 8/2/14	REVISION: Updated for Final Submit	BY: BNC
SURVEY: OBCA	RECORD DRAWING: []	DATE: 7-23-14
DESIGN: OTHERS/OBCA	PRELIMINARY: []	JOHN 2011-52
DRAWN: BJB/BNC	SKETCH/CONCEPT: []	FILE: 2011-52-S8
CHECKED: JAO		PLAN SHEET #
SCALE: 1"=40'		S14

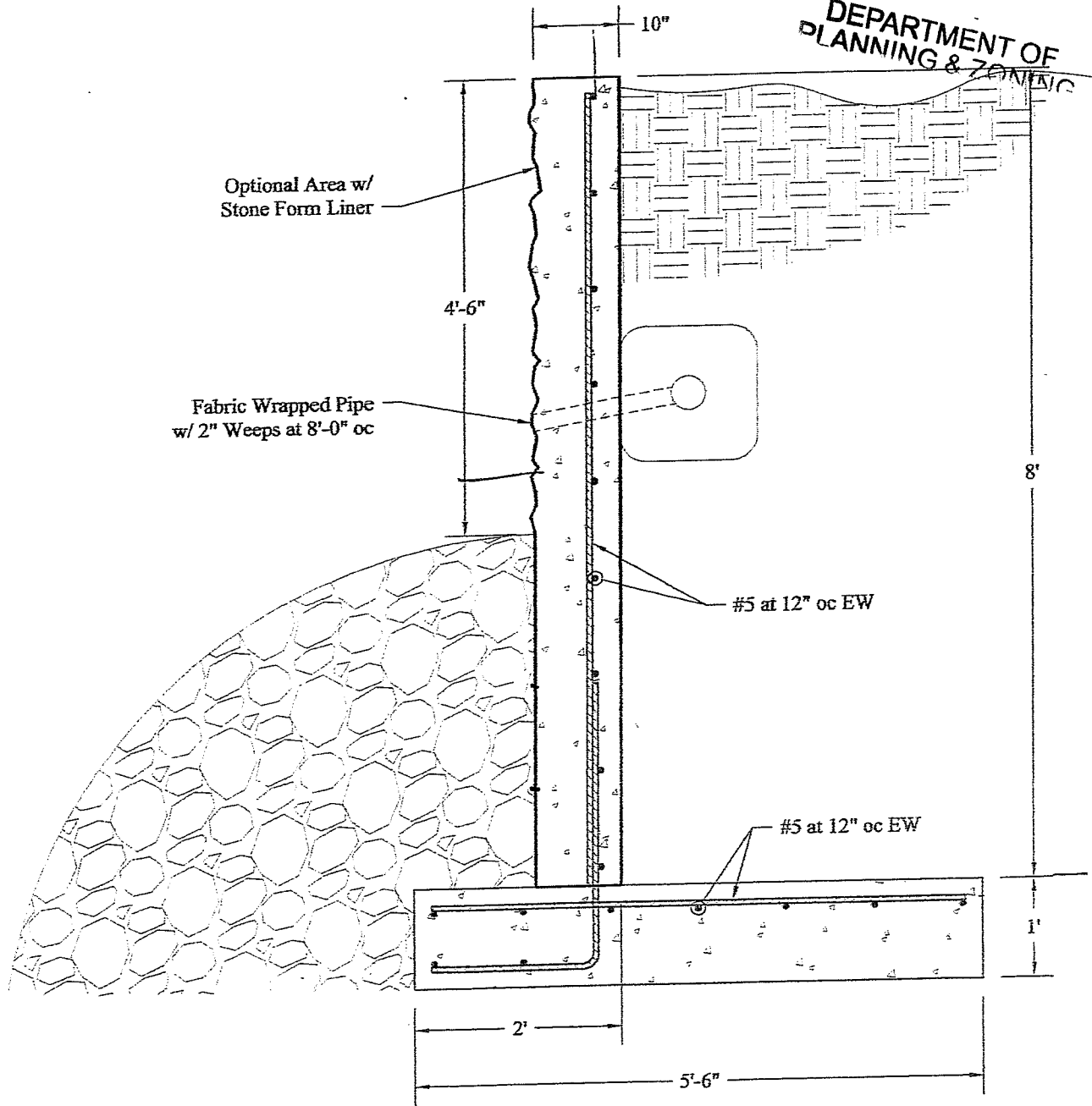
O'LEARY-BURKE CIVIL ASSOCIATES, PLC		IRELAND PROPERTY	
1 CORPORATE DRIVE, SUITE 1 ESSAY, VT 05759 PHONE: 878-9990 FAX: 878-9990 E-MAIL: polary@olearyburke.com		Burlington, VT	
		PUMP STATION DETAILS	

S15

CROSS SECTION FOR A "Form Lined" Wall.

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

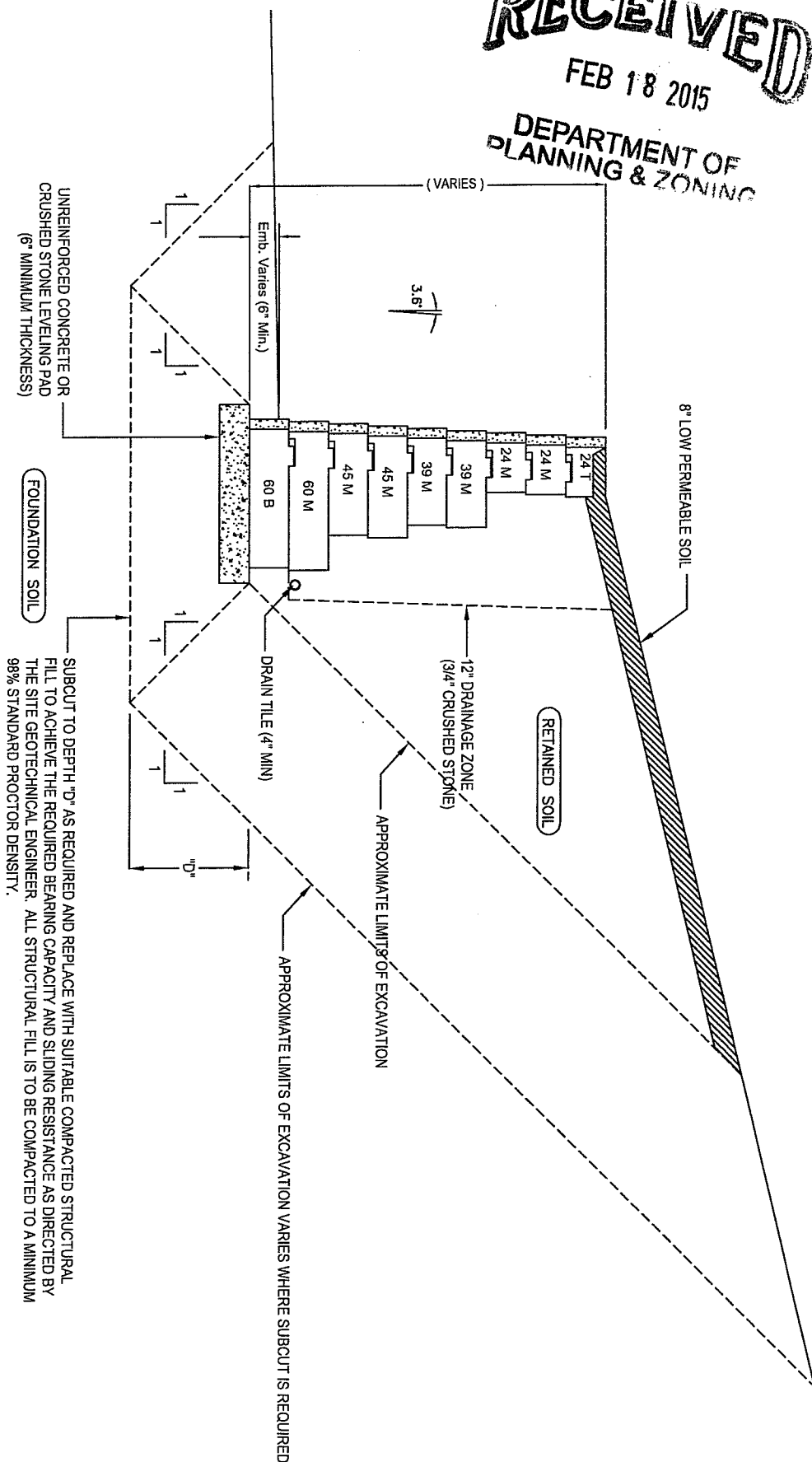


Retaining Wall Section (Typical)

Grades Street Appointments

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING



Copyright 2008 ReCon Wall Systems, Inc.

Design is for internal stability of the RECON wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to RECON's specification for this project.

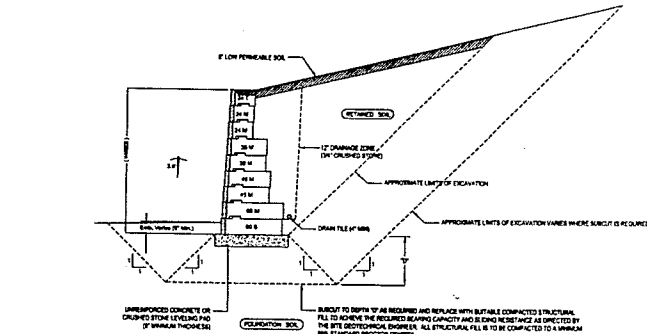
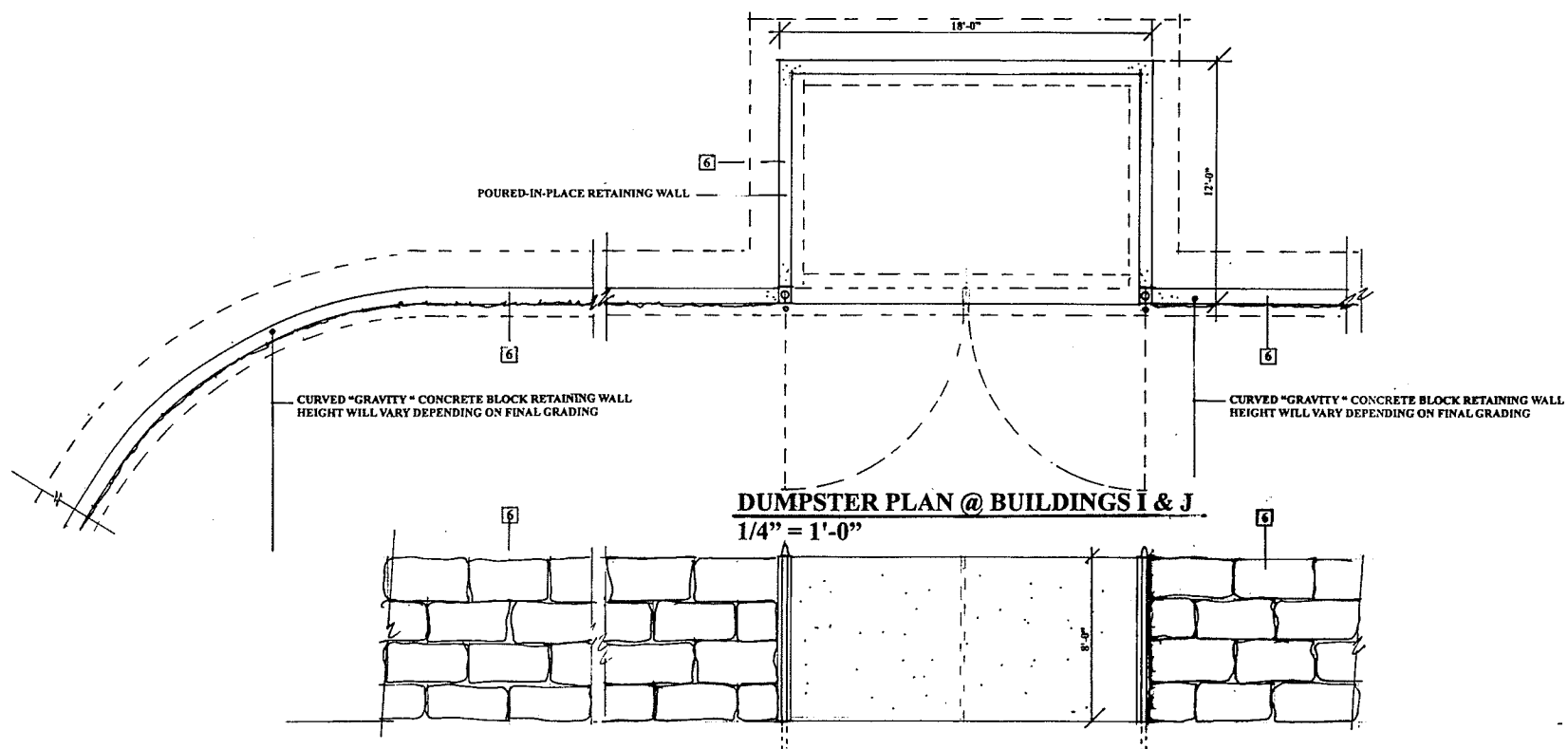
Disclaimer: This drawing was prepared by ReCon Wall Systems, Inc. and to the best of our knowledge, accurately represents the product use in the application that is illustrated. This drawing is for conceptual, instructional, and estimating purposes only. Anyone making use of this drawing does so at their own risk and assumes all liability for such use. Final design for construction purposes must be done by a registered professional engineer who is familiar with the product and who has taken into account the specific site conditions.

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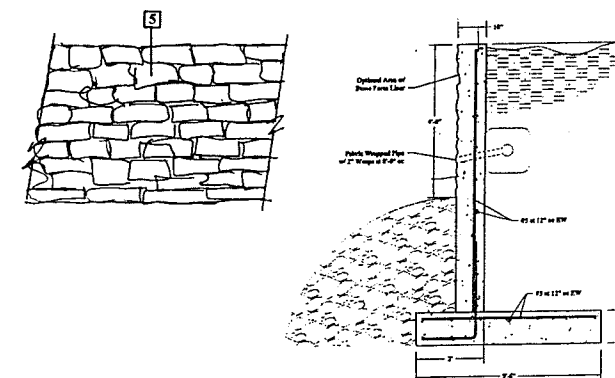
DRAWING # 102

**TYPICAL GRAVITY WALL
CROSS SECTION**

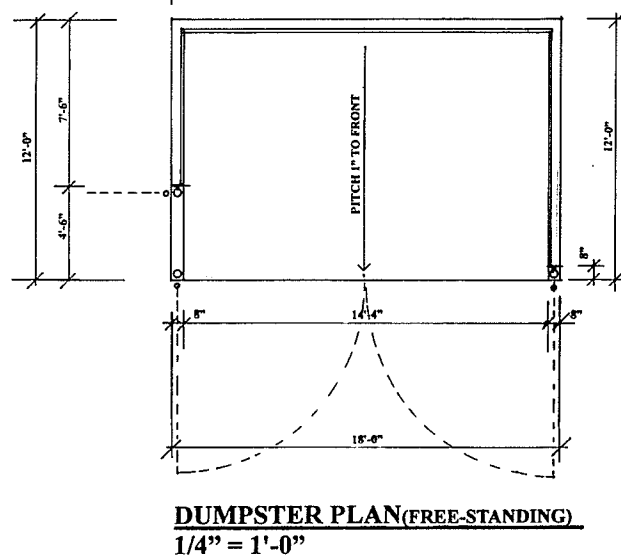
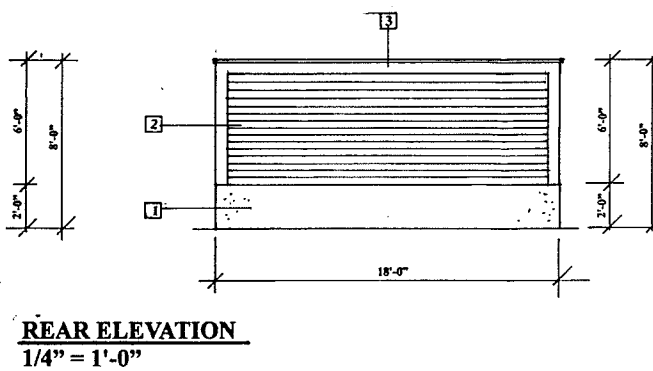
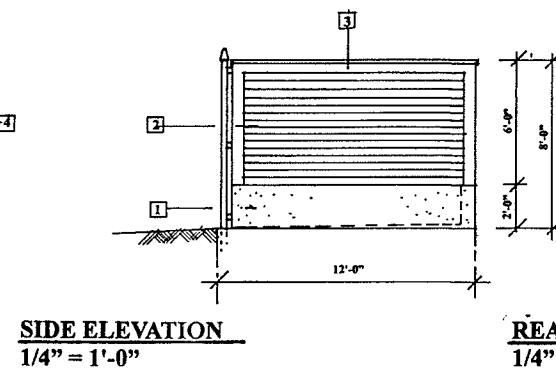
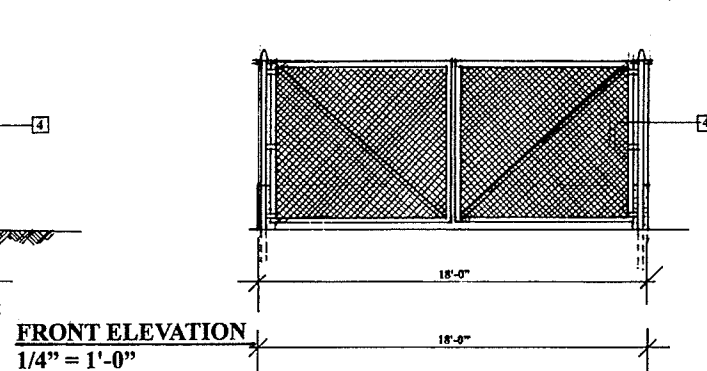
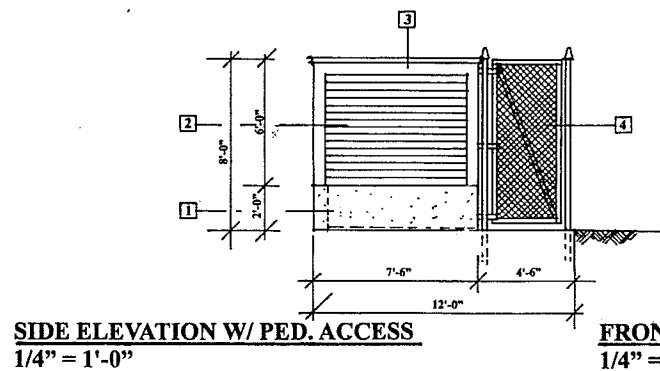
RECON WALL SYSTEMS, INC.
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ST LOUIS PARK, MN 55426
PH: 952-922-0027
www.reconwalls.com



"GRAVITY" CONCRETE BLOCK RETAINING WALL



"FORM-LINED" CONCRETE RETAINING WALL



DESCRIPTION OF EXTERIOR MATERIALS

- | | | |
|---|---------------------------|--|
| 1 | LOWER STRUCTURE | POURED-IN-PLACE CONCRETE |
| 2 | ENCLOSURE | "HARDIE" CEMENTIOUS LAP SIDING OR EQUAL - 4" REVEAL
COLOR AND TEXTURE SELECTED BY ARCHITECT |
| 3 | STANDING AND RUNNING TRIM | TRIM BOARDS "AZEK" TRIM BOARDS OR APPROVED EQUAL |
| 4 | ENCLOSURE | GALVANIZED WIRE FENCING |
| 5 | RETAINING WALL | FORMED-LINED POURED-IN-PLACE CONCRETE |
| 6 | RETAINING WALL | |

NOTE:
GENERAL CONTRACTOR IS TO VERIFY ALL DIMENSIONS
ON THIS DRAWING PRIOR TO CONSTRUCTION.
GENERAL CONTRACTOR IS TO VERIFY ALL SITE
CONDITIONS PRIOR TO CONSTRUCTION.



GARDEN STREET APARTMENTS
DUMPSTER SCREENING &
RETAINING WALL DETAILS
GARDEN STREET
BURLINGTON VERMONT

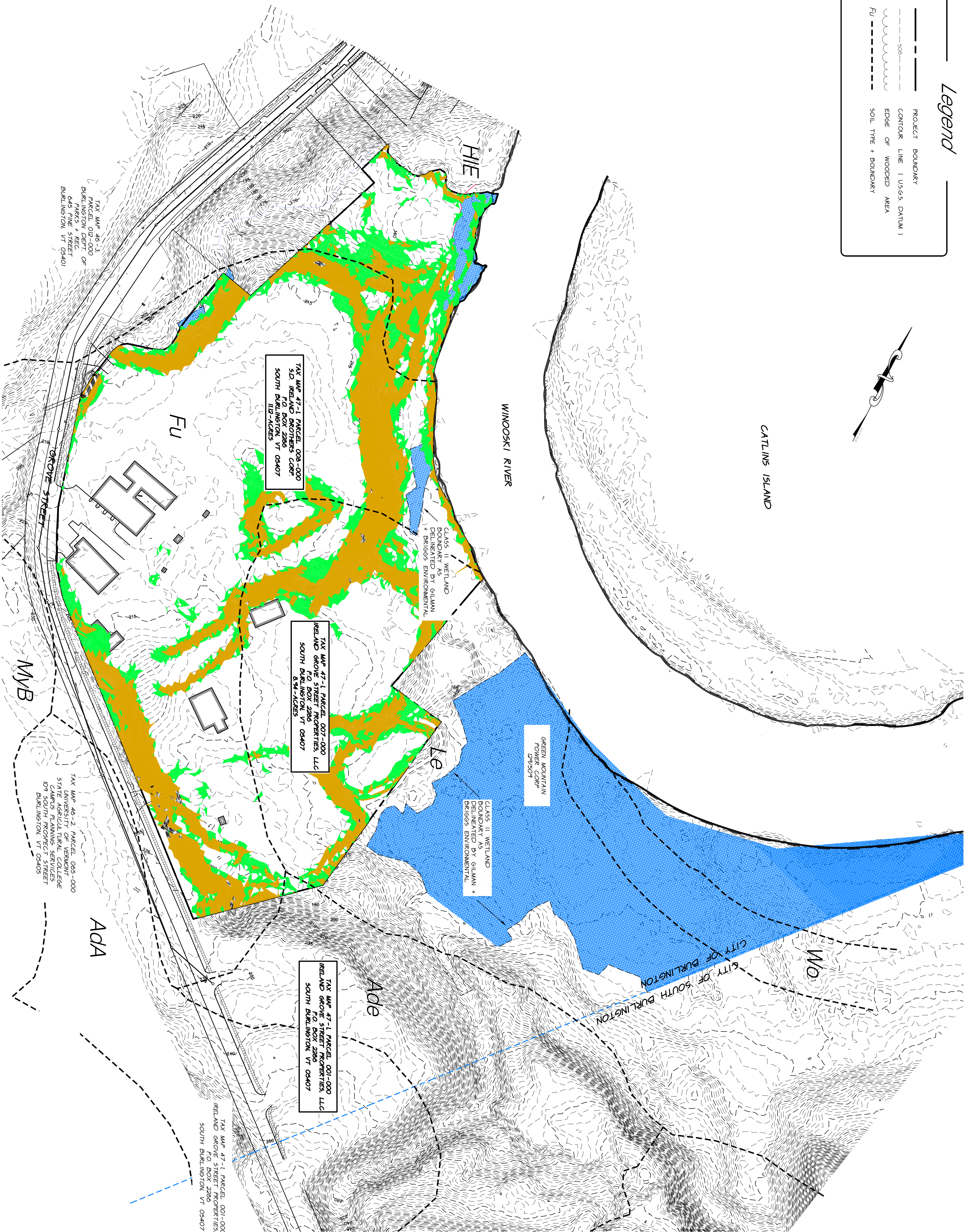
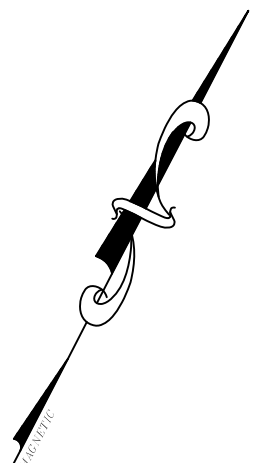
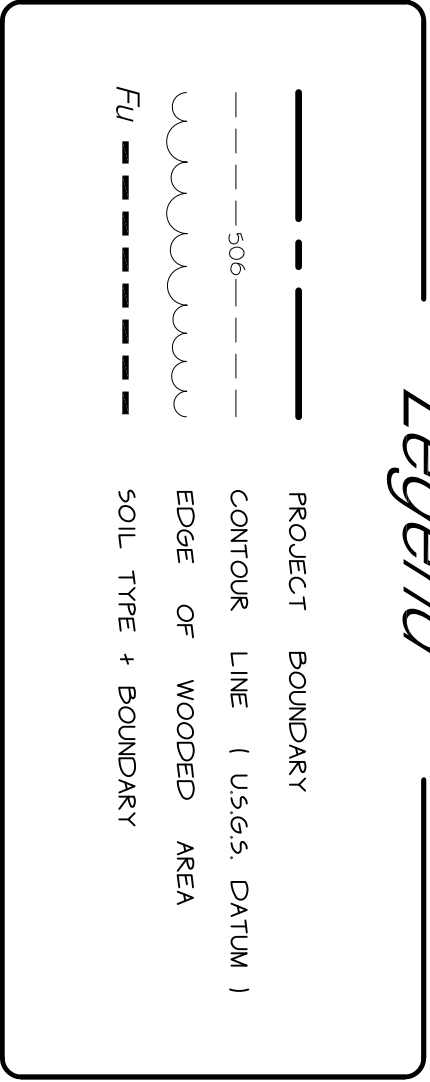
"FORM-LINED" CONCRETE RETAINING WALL
"GRAVITY" CONCRETE BLOCK RETAINING WALL
DUMPSTER ENCLOSURE
DETAILS

MICHAEL L. DUGAN
REGISTERED ARCHITECT
STATE OF VERMONT
NO. 1071

FEBRUARY 16, 2015

A-11

Legend



Zoning Information

ZONING DISTRICT: RESIDENTIAL - LOW DENSITY

DIMENSIONAL REQUIREMENTS	REQUIRED	PROPOSED
MINIMUM ROAD FRONTAGE	60'	1290'
MINIMUM LOT SIZE	10,000 S.F.	N/A
MAXIMUM DENSITY	7 UNITS/AC.	N/A
MAX. LOT COVERAGE	50% OF 3 ADJACENT LOTS ON BOTH SIDES	14.6%
MINIMUM FRONT SETBACK	14'	14'
MINIMUM SIDE SETBACK**	25'	300'
MINIMUM REAR SETBACK**	25'	300'
MINIMUM INTERIOR SETBACK	75'	375'
**NOT TO EXCEED 30'		
**NOT TO EXCEED 75'		

Buildable Area Calculation

TOTAL LOT SIZE - 20,87 ACRES (908,960 SQ. FT.)

-LESS PORTIONS OF THE PROPERTY COVERED BY STREAMS, PONDS, WETLANDS, AND LANDS WITH A SLOPE IN EXCESS OF 30%.

-SLOPES GREATER THAN 30% - 184,791 SQ. FT.

-WETLANDS - 18,945 SQ. FT.

-THE DNB MAY UNDER CONDITIONAL USE CRITERIA ALLOW UP TO 50% OF THE MAXIMUM BUILDING DENSITY OR LOT COVERAGE TO BE CALCULATED ON LANDS WITH A SLOPE BETWEEN 15-30%.

-SLOPES BETWEEN 15% AND 30% - 107,330 SQ. FT.

TOTAL UNBUILDABLE AREA - 6,03 ACRES (262,461 SQ. FT.)

(184,791 SQ. FT. + 18,945 SQ. FT. + 107,330 SQ. FT. + 262,461 SQ. FT.)

TOTAL BUILDABLE AREA - 14,84 ACRES (646,499 SQ. FT.)

(908,960 SQ. FT. - 262,461 SQ. FT. - 646,499 SQ. FT.)

Density Calculation

BASE DENSITY: 8.75 DU PER ACRE
8.75 DU/ACRE X 14,84 BUILDABLE ACRES = 129,85 UNITS
RESIDENTIAL CONVERSION BONUS** 8 DU PER ACRE
8 DU/ACRE X 14,84 BUILDABLE ACRES = 118,72 UNITS
TOTAL ALLOWABLE DENSITY** = 248,57 UNITS
139 IN-HOME UNITS + 20 MARKET RENT UNITS

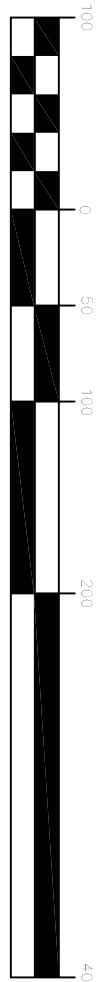
**PER SECTION 4.4.5 (D) TABLE 4.4.5-7, THE SECTION ALSO ALLOWS FOR A MAX LOT COVERAGE OF 50%.

**PER SECTION 4.14 TABLE 4.14-1 A TOTAL OF 5% OF ALL UNITS ARE REQUIRED TO BE INCLUSIONARY UNITS. THIS PARCEL WOULD THEN ALLOW FOR 35 INCLUSIONARY UNITS AND 20 MARKET RENT UNITS FOR A TOTAL OF 250 RESIDENTIAL UNITS.

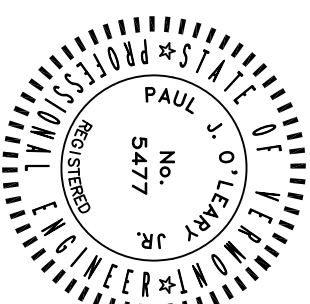
Soil Information

FU-FILL LAND	1294 ACRES
HIE-HARTLAND VERY FINE SANDY LOAM, 25 TO 60 PERCENT SLOPES	194 ACRES
LE-LIMERICK SILT LOAM	590 ACRES
ADE-ADAMS AND WINDSOR LOAMY SAND, 30 TO 60 PERCENT SLOPES	04 ACRES
	20,87 ACRES TOTAL

GRAPHIC SCALE



1 inch = 100 ft.



DATE: 8/31/24	REVISION: Updated for final submittal	BY: BNC
SURFER: BNC	☐ PRELIMINARY	DATE: 7/23/14
DESIGN: BNC	☒ RECORD DRAFTING	DATE: 2011/12
OTHERS: BNC	☐ SKETCH/CONCEPT	DATE: 2011/12/20
DRAWN: BNC		DATE: 2011/12/20
CHECKED: BNC		DATE: 2011/12/20
SCALE: 1"=100'		DATE: 2011/12/20
O'LEARY-BURKE CIVIL ASSOCIATES, PLLC 1 CORPSTATE DRIVE, SUITE 1 BURLINGTON, VT 05403 PHONE: 878-8800 FAX: 878-8809 EMAIL: paul@olearyburke.com		PLAN SHEET # S1

Burlington Development Review Board

149 Church Street, City Hall
Burlington, VT 05401

www.burlingtonvt.gov/pz/drbb

Phone: (802) 865-7188

Fax: (802) 865-7195

Austin Hart
Michael Long
Jonathan Stevens
Brad Rabinowitz
Missa Aloisi
Israel Smith
A. J. LaRosa
Alexandra Zipparo (Alt.)
Jim Drummond (Alt.)



BURLINGTON DEVELOPMENT REVIEW BOARD

Tuesday, April 7, 2015, 5:00 p.m.

Contois Auditorium, City Hall, 149 Church Street, Burlington, VT
Minutes

Board member present: Austin Hart (Chair), Jonathan Stevens, Brad Rabinowitz, Missa Aloisi, Michael Long, Israel Smith. **Board members absent:** Jim Drummond, A.J. LaRosa and Ali Zipparo
Staff members present: Ken Lerner, Scott Gustin, Mary O'Neil, and Anita Wade.

I. Agenda

No change to agenda.

II. Communications

Supplemental communication accepted by Board regarding Weston St.

III. Minutes:

In packet. Chair advises board member to bring comments or corrections to deliberative.

IV. Public Hearing

1. 15-0865VR; 2-4 North Winooski Ave (DT, Ward 3) Miller North Properties/Tom & Deb Miller

Variance request to change use from café to bar/tavern (Project Manager, Scott Gustin)
Applicants were sworn in by A. Hart.

D. Miller one owners of Bar presented an expansion of existing bar including more tables, expanded kitchen. Not near residential buildings.

A.Hart, said use is not permitted under current zoning code and the question is whether Board can approve a nonconforming use or perhaps present to Planning Commission for a change in zoning.

Jonathan Stevens, previous owners expanded into the two stores.

K.Lerner said it was a coffee shop selling food.

B.Rabinowitz said it could be accessible space as separate business.

Jonathan Stevens questioned the debate

K.Lerner to maintain bar business, it must be separate from other business.

D Miller said there are no guarantees and need to consider Code enforcement. The former Radio Bean served more food than alcohol.

M.O'Neil noted the benchmark to look at.

Jonathan Stevens cannot grant variance.

A.Hart Board will deliberate on matter and speak to P & Z about options.

Public Hearing Closed.

2. 15-0656CA/MA; 289 College St (RH, Ward 8) 289 Live/Work, LLC

Addition of 12 residential units to existing mixed use building (office and 1 residential unit) for a total of 13 residential units and office use (Project Manager, Mary O'Neil)

Bruce Baker, Architect Bob Duncan and Greg Doremus were sworn in by A.Hart.

B.Baker, Pre-existing use; rental office sharing cafeteria; live work concept as two choices; The fallback to 3 or 4 bedroom ended up as a decision to go to 1 unit for residents to live and work same in building and with easier management of building.

Greg Doremus described the work done with staff at Planning and Zoning last year getting input for project. A full application was put through in November with input from DRB about design, color, entry and parking. A new design was worked up and presented

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Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188

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to DAB and Planning and Zoning on the bike rack, entryway, color; with the final application tonight. Positive meeting with Conservation Board about rain garden; parking counts, offices, a one unit apartment and one parking lot for daytime and evening use. Greg made reference to studies of parking through ITE Parking Analysis report. ITE recommended 2 spaces per 1,000sq ft or every 1.2 spaces/unit. Actual Parking Analysis performed were from 120 observations, 7 days a week. At 5,800sq ft, 12 spaces are needed at peak for office use and 15 spaces at peak for residential. Picked highest observations over 8 weeks and peaked out with parking at noon time. 16 metered spaces available.

Jonathan Stevens had questions on metered spaces;

M. Aloisi had questions on parking.

M Long asked if space was staying same.

M. Aloisi asked if residents were allowed to leave car in lot.

Greg affirmed that residential parking was allowed during day.

Bob Duncan presented design drawing to Board showing gravel parking lot addition, and existing site plan. Proposal to create additional building similar as original bldg. Greg mentioned advantage in making entrance ADA with lift for 1 unit accessible and other 3 fully adaptable and a rain garden heavily vegetated for stormwater collection in center; new bike racks, new stairs to serve to all locations of building, significant perimeter vegetation, and a dumpster location which reduces park spaces by only one space. Height of original building is same as new with fiber cement wood product, 8" to weather, natural brick color, bay window galvanized finish, handicap entrance in rear and main entrance off College St.

M. Aloisi questioned the connector between buildings.

Jonathan Stevens questioned the dumpster and how far a tenant needs to walk to dumpster or B Duncan guess-estimate is 65 ft from entrance to dumpster;

B Duncan, presented solid fencing and biking pictures; under lot coverage requirements;

M. Aloisi had questions about rain garden and roof

B Rabinowitz trouble with the presence of the building and its character;

B Duncan said he was comfortable with the design. He mentioned that differential was a term used in regard to a historic structure calling for similar pattern, mirror image of buildings, which the site plan promotes with the prominent entrance from College St link courtyard

B Rabinowitz said the color looks more brown than red brick

A Hart question about landscaping, shading from existing properties,

B Duncan said significant vegetation will be incorporated

A Hart concerns about screening particularly in rear of parking lot

B Duncan said plantings are done to avoid mowing;

Other general questions by Board members;

Public Hearing Closed.

3. 15-0840CU; 27 Arlington Ct (RL, Ward 7) Nathan Caswell

Establish 1 bedroom bed & breakfast within existing single family home (Project Manager, Ken Lerner)

A Hart swears in Nathan Caswell

N.Caswell said Air B&B is no change to property only its use where he will rent one of two bedrooms for temporary stay, but not every day of week. On average 2 to 3 nights per week. N Caswell worked w/ Zoning Administrator on expectations of parking. He shared paper document information on parking with Board.

A Hart asked him to walk thru parking;

N Caswell, showed how two parking in tandem worked in photos.

A Hart, question on whether previous use will exist

N.Caswell said it will not.

A Hart said Board will remove previous use;

A Hart asked if he would follow staff clarification/conditions;
N Caswell can abide by the conditions
Public Hearing Closed at 6:20pm.

4. 15-0797AP; 164 North Willard St (RL, Ward 1) Luke Purvis

Appeal of Notice of zoning violation regarding expanded parking (Project Managers, Ken Lerner & Jeanne Francis)

A.Hart swore in all willing to comment on project.

Code Enforcement said a decision on a violation was remedied; encroachment of parking on 158 North Willard violations was remedied.

A Hart are the easement and parking strip different;

Code Enforcement: easement is owned by 158 No Willard, parking strip is 164 No W.;

Code Enforcement determined no violation, documented no parking; reviewed affidavit,

A Hart said that Board has two affidavits.

A Hart has not established 15 year statute of limitations.

Code Enforcement said 158 No W claims no parking has occurred within area;

A Hart, explained materials;

Code Enforcement commented that a violation that more than 60 days is a discontinuance..

Attorney mentioned a discussion on ordinance 5.3.2 distinct time line in ordinance.

Code found complaint was unfounded and found no violation on 1/29/15.

B Rabinowitz questioned parking lot;

Code Enforcement: parking lot in question is on the south side;

A Hart said it was unusual that an owner appeals a finding of no violation;

Code finding was no violation;

Jonathan Stevens questioned the 60 year versus 1 year use explanation;

Attorney explanation was that a 60 day nonuse cancelled the 15 year use.

Appellant has understanding of non-violation,

Mr Purvis lost his ability to park vehicles; factual basis for not being able to park;

B Rabinowitz, questions on south side parking;

Mr Purvis didn't know what he had to remove in regard to parking;

A Hart asks Board to conclude with a binding decision on what is the distinction between the easement and the parking strip where no parking is allowed;

Mr P shows Board on photo the boundary lines; parking on strip and easement.

Procedural Jan 29th letter is unsubstantiated.

Mr Purvis is questioned by attorney on the following:

As many as 3 parking vehicles in parking area is neighbors' complaint.

Mr LeClaire use of area over 47 years, rented property and supported 4 cars.

Mr Purvis researched property and spoke to owner about buying property in 2013.

Issue with neighbor on use of property where neighbor asks 164 No W to reduce easement size.

Mr Purvis said the Lease provides 8 parking spaces with City and does not intend to use that many spaces. Has reduced use of parking area.

B Rabinowitz, said there is not adequate information to make a decision.

A Hart said that Mr Purvis is establishing the 15yr use.

Mr Purvis claims dispute is over the easement and having access to the easement.

Questions regarding the procedural matter.

A Hart asking Board to resolve it now.

B Rabinowitz, questions on 3 car garage.

K Lerner said this is a pre-existing use.

Continuing with questions by Mr Purvis' attorney asking about consistent use of area within 30 days. The question is if photos taken in the evening would show parked cars.

Additional evidence shown by 4 photos there was parking during time when Code came and indicated there was no parking.

Mr Purvis offered video made within two weeks of closing that parking was available. Jonathan Stevens and A Hart asked Mr Purvis if only two cars were associated with residence made by his statement.

Jonathan Stevens question about if parking was happening on gravel area and if plowing maintained both areas.

K Lerner stated that Mr Cleary's affidavit was not included in packet.

Mr and Mrs. Cleary, dispute this.

A Hart questioned if easement and strip had been used within past 19 months. The concern is about runoff into yard and into basement for 158 North Winooski, setback of parking, no delineation of parking, and no zoning permits.

A Hart questioned the site plan for parking;

K Lerner said there was no site plan;

Mr Cleary mentioned on March 7, 2008 the dumping of gravel as shown in picture; Photo 5751, April 26, 2014 shown to Board. On July, 2012 to April 26, 2014 there were no cars. Mr LeClaire used northern parking area. Mr Cleary mentioned ample parking for 4 cars in northern area and 3 parking spaces in garage. Photos dated 2013 were presented to Board by Mr Cleary. There were no photos showing parking south of driveway during time where Mr Purvis claims cars are parked.

M Long asked if parking area was ever abandoned.

Mrs. Cleary said Mr LeClaire, former owner, parked in driveway and had no tenants for years. At that time parking changed from northern area to southern area and over time two vehicles angled in spaces; Questioned about legitimate parking area and that City condones

M Long asked about any permits;

K Lerner responded there were no permits

Code response, Jean Francis, decision is on a two foot strip;

Mr Cleary owns easement according to City records and that he could park there;

Code found no parking upon inspection.

Public Hearing Closed at 7:13pm.

5. 15-0830AP; 18-20 Weston St (RL, Ward 1) Charles Burns

Appeal of Notice of zoning violation regarding expanded parking, trash, and outside storage (Project Managers, Ken Lerner & Jeanne Francis)

M..Long recused.

Request for continuance by Attorney for Charles Burns. He mentioned some issues are resolved, and wants to work with staff on others.

A Hart said he understands the merits although are people wanting to comment.

Attorney wants to vacate.

Bill Ward and Jean Francis present evidence before the Board. JF said 2005 complaint came in on parking for south side of property. JF found the Owner could not prove parking 15 years on property. Jeanne Francis previously worked with owner, Burns, on plantings. Jeanne Francis moved forward with plan. In 2014, there was a complaint on property. Code met with him about complaint and discussion on progress with the 2005 plan. November, 2014 met with Burns asked about storage in units;

A Hart asked for clarification on units as garage bays

Code affirms 6 garage bays; confirmed that nonresidents were parking at bays which is a violation;

A Hart asked for clarification of parking and use of garage bays;

Jeanne Francis said parking has increased. Presently parking is being used and on grass; garage bays are not being used by residents; Black and White undated photos submitted were complaints by citizens on parking, trash receptacles changed locations, use of green space, use of garage bays not being used as storage for tenants and there is no approved site plan from DRB or P & Z;

Code said there would be less confusion with enforcement if there was a site plan; cannot give lot coverage without approved site plan.

B Rabinowitz questioned if there was an attempt to enforce a plan;

K Lerner mentioned black and white photographs given to Board taken today at 3:00pm to give a reference point to 2005 plan.

A Hart indicated need for opportunity to reply from residents

Swearing in of residents.

Attorney mentioned the established duplex had been compliant since 2005 with no parking problem;

A Hart asked if parameters were set as to what should exist in the 2005 plan;

Attorney said 2005 was only a discussion tool. Owner was willing to testify that for 20 years no change in parking.

A Hart said the 2005 plan was not binding to current situation if parking expanded

C Burns gave history of property since 2002 from the owner he sold it too; garage a former horse barn was used for storage.

Attorney said part time property manager uses garage bays

M. Aloisi asked how many parking spaces allowed

Attorney replied, four spaces.

A Hart noted that equipment spills out into area questioning maintenance of area.

C Burns affirmed this observation.

Attorney said the garage is not viable parking structure

A Hart said the storage for this property is not storage for other properties

Attorney affirms this may be case mentioning Burns daughter uses space.

A Hart asked to hear from neighbors

Jonathan Stevens question filing with Planning and Zoning

Caryn Long spoke about the duplex with tenants and how for 15 years cars always parked in garage; no cars parked in 1988; no permits on file, and that the zoning for the RL district requires 65% green space; since the purchase of adjacent property by C Burns, parking in back and front of Weston St is shown in 4 photos to Board and a total nine people living in duplex with possible evidence of commercial use;

Judy Rosenstreich, adjacent neighbor, marked change in use and seven residents parking on green area. As a purchaser of own home in 1998 has since observed more cars; A Hart asked when did she notice a difference; Judy R. observed since sale of property between Riley and Burns with change in use at garage bays.

A Hart asked if this has that been happening for 15 years.

JR tenants began to park in area in 2014;

Candace Page spoke how she lived in area since 1984 and was aware notice of violation about nonresidents parking at 1820 and an increase in parking after property was sold to Mr Burns;

A Hart questioned about the parking increased at 18-20;

CP seen multiple cars parking.

A Hart questioned Board about a continuance.

Sharon Bushor, council person from ward 1; once lived at 12 Weston asked to request to deny appeal based on use of property and due to violations. She indicated the statute of limitations doesn't apply to use and it was factual basis that a business happening at site was not allowed.

A Hart said this may have been happening for 15 years and therefore this allows a continuance.

Sharon, Bushor said there was a history of former residents where there was more grass before than now as referenced by Code Enforcement,

Attorney mentioned that witnesses could not be at the meeting to respond;

A Hart requested a continuance for the hearing on May 5th,

A Hart made the motion to move hearing to May 5th. Jonathan Stevens seconded this motion

A Hart said he wants to know what are the measures are in place now for parking.

Resident questioned about participation at this meeting.

Resident mentioned the Coop's request for a stay.
A Hart said Board was not in position to make that decision on a stay.
Meeting Adjourned.

V. Other Business

VI. Adjourned.

Deliberation scheduled for Monday, April 13, 2015 at 5:00 pm at P & Z .

A. Hart - Chair, Development Review Board

Date

Anita Wade, Zoning Clerk

Date

Department of Planning and Zoning

149 Church Street
Burlington, VT 05401

<http://www.burlingtonvt.gov/PZ/>

Telephone: (802) 865-7188
(802) 865-7195 (FAX)

David E. White, AICP, Director
Ken Lerner, Assistant Director
Sandrine Thibault, AICP, Comprehensive Planner
Jay Appleton, Senior GIS/IT Programmer/Analyst
Scott Gustin, AICP, CFM, Senior Planner
Mary O'Neil, AICP, Senior Planner
Elsie Tillotson, Department Secretary
Anita Wade Weber, Zoning Clerk



MEMORANDUM

To: Development Review Board
From: Mary O'Neil, AICP, Senior Planner
Date: April 21, 2015
RE: Sketch Plan Review for 80 and
94 Colchester Avenue; 27 Fletcher
Place

Note: These are staff comments only. Decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

File: ZP15-0896SP

Location: 80 and 94 Colchester Avenue; 27 Fletcher Place

Zone: Institutional **Ward:** 1E

Date application accepted: March 19, 2015

Revised plans received: April 13, 2015.

Applicant/ Owner: Randall Miller and Francis J. VonTurkovich

Request: Construct 79 apartment units in 3 story building with underground and above-ground parking facilities.

Background:

72 Colchester Avenue

- **CU-97-050;** Housing replacement exemption. Approved with conditions March 1997.
- **Zoning Permit 89-051 / COA 89-013;** construct 18' x 20' second story addition on rear of existing single family home, no change to site plan. Approved February 27, 1989.



80 Colchester Avenue

- **Zoning Permit 15-0390SN**; install new freestanding sign for Hillel. Approved October, 2014.
- **Zoning Permit 15-0042CA/CU**, change of use from office to membership club; exterior staircase and install bike rack. Approved August 2014.
- **Zoning Permit CU 2004-016**; application for use by UVM affiliated Center for Children, Youth and Families Administrative offices. Approved with conditions, January 2004.
- **Zoning Permit 01-389**; installation of an externally illuminated freestanding sign for the existing medical (chiropractic) office. Approved April 2001; not pick up and confirmed expired in 2011.
- **Zoning Permit CU 2001-035**; change of use of first floor space from office to medical chiropractic office. Removed from agenda as determined that the proposed conversion from a medical billing office to a chiropractic office on the first floor does not require conditional use review. February 2001.
- **Zoning Permit 00-516**; refurbish existing side porch to allow ramping of deck for handicapped accessibility to the existing medical office. No increase in footprint. December, 2000.
- **Zoning Permit 99-277**; removal of slate roofing material, replacing with asphalt shingles for the existing medical office. Approved December 1998.
- **Zoning Permit 92-123**; construction of ten additional parking spaces for a total of sixteen for the existing medical office and residential unit. Existing curb cut to be eliminated, with joint use of adjacent property's (medical office / 94 Colchester Avenue) curb cut. Approved September 1991.
- **Zoning Permit CU92-011 / COA 92-025**; eliminate curb cut and driveway from #80 and utilize widened drive at traffic light at #94. Remove existing garage, change configuration and size of paved parking area. No change to use of #80 as office and apartment. Approved with conditions September 1991.
- **Request for Conditional Use Permit** to construct a private parking lot. July 1990. Application withdrawn by applicant.
- Notice of appeal to the Zoning Board of Adjustment seeking a special exception to erect a 16' x 16' addition to the northeast corner of existing doctor's office. Approved July 1968.

94 Colchester Avenue

- **Non-Applicability of Zoning Permit Requirements 07-703NA**; replace asphalt shingle roof with same. May 2007.
- **Zoning Permit 92-025**; site changes for combined access with #80. See above. Approved September 1991.

- **Zoning Permit 91-154;** remove two windows and one door from north elevation and install three windows on same side. No change in use. See 89-012. October 1990.
- **Zoning Permit 89-042 / COA 89-012?** (illegible); replace existing vestibule, new siding and windows, new walkways and landscaping. February 1989.
- **Zoning Permit 780073;** erect an 18' x 30 addition in rear of existing building. June 1977.
- **Zoning Permit;** desire to rent portion of premises for doctor's office. Approved May 1963.

27 Fletcher Place

- **Non-Applicability of Zoning Permit Requirements 15-0959NA;** Install dryer hookups on 2nd floor. Upgrade wiring to meet code. Upgrade plumbing to meet code. April, 2015.
- **Zoning Permit 15-0955CA;** Change of use from single family residential to duplex, modify two existing windows, create new parking spaces. *Currently under review.*
- **Zoning Permit 81-684;** replace 26" x 26" double hung window with Anderson window 24" x 48". September 1981.
- **Notice of Appeal to Zoning Board of Adjustment;** Erect a carport within three feet of the property line. Approved December 1968.

Overview: Contiguous property owners propose a collective development of four lots, allowing for utilization of large rear/interior area for new housing. The combined parcel size is 3.62 acres, fronting on both Fletcher Place and Colchester Avenue. A single building with 79 residential units is proposed, with both surface and underground parking. All existing, street-facing structures are proposed to be retained. Access for the interior of the site is intended to be organized at the traffic signal at UVM Medical Center, with another ingress/egress further west at an existing driveway west of 72 Colchester Avenue. Vehicular circulation is proposed to be enhanced, allowing shared use of internal roadways/parking and access for all existing and proposed uses to the traffic signal onto Colchester Avenue.

As there are existing structures on each of these lots, the project will be reviewed as a Planned Unit Development.

Applicable Regulations:

Article 3 (Applications, Permit and Project Reviews), Article 4 (Zoning Maps and Districts), Article 5 (Citywide General Regulations), Article 6 (Development Review Standards), Article 8 (Parking), Article 9 (Inclusionary and Replacement Housing), Article 10 (Subdivision), and Article 11 (Planned Unit Development)

Article 3: Applications and Reviews

Section 3.2.1 (c) Sketch Plan Review

Upon request of the applicant, or as may be required under Article 10 – Subdivision or Article 11 – Planned Development of this ordinance, A Sketch Plan Review may be scheduled before the DRB prior to the submission of an application in order to provide the applicant with constructive suggestions regarding a conceptual development proposal. In order to accomplish these objectives, the applicant shall provide the following:

1. *A brief narrative and preliminary concept showing the locations and dimensions of principal and accessory structures, parking areas, and other planned features and anticipated changes in the existing topography and natural features.*

A project area site plan has been provided, including parcels and property boundaries. An estimated set-back line is included.

2. *A sketch or map of the area which clearly shows the location of the site with respect to nearby streets, rights-of-way, properties, easements and other pertinent features within 200 feet.*

See above.

3. *A topographic or contour map of adequate scale and detail to show site topography and the relationship to adjoining properties.*

Contours are noted north of the project area, in the adjacent ravine. No contour lines are visible at the specific project site leading to the assumption that the entire project area is at 310. Clarification will be required.

4. *Payment of the applicable Sketch Plan Review fee.*

The Sketch Plan Review fee for one board review was paid.

Part 3: Impact Fees

Article 3.3.2 Applicability

Any new development or additions to existing buildings which result in new dwelling units or in new nonresidential buildings square footage are subject to impact fees as is any change of use which results in an added impact according to Section 3.3.4.

The applicant will be required to provide the gross new area to staff for a calculation of appropriate Impact Fees.

Section 3.3.7 Time and Place of Payment

- (a) *New Buildings: Impact fees must be paid at least seven (7) days prior to occupancy of a new building or any portion thereof.*

As noted.

Part 5, Conditional Use & Major Impact Review:

Section 3.5.6 Review Criteria

(a) Conditional Use Review Standards

1. *The capacity of existing or planned community facilities;*

The proposed development would be served by municipal water and sewer. This project will need scheduling for the Technical Review Committee to determine any concerns posed by the proposed intensity of use, traffic demand and infrastructure limitation.

Wastewater and service capacity is available, but anticipated demand is not yet known. A state wastewater permit will also be needed prior to construction.

2. *The character of the area affected;*

The project is proposed within the Institutional zone, where greater scale and intensity of use can be considered; however respect for historic residential buildings and sensitive transitions are required. The character of the area is divided by Colchester Avenue: To the north are existing residential scale buildings; many of those converted to medical offices.

72 Colchester Avenue received an exemption from housing replacement in 1997 when it was a single family house. No change-of-use permit is within the zoning record. 80 Colchester Avenue is home to Hillel; both structures reflect the residential character associated with historic Colchester Avenue. 94 Colchester Avenue is a medical office, however residential in scale. Fletcher Place is entirely residential, with 7 single family homes, and 2 triplex residences (7-11 and 19 Fletcher Place.) The use at 50 Fletcher Place is unknown as it is owned by UVM, however conveys the character is of a single family Colonial style home.

As most of the structures on the north side of Colchester Avenue / west side of Fletcher Place are residential, additional residential development would be in keeping with the character of the area.

The proposed three story, large mass building envelope is not in character with existing residential structures or residentially scaled buildings along the north side of Colchester Avenue. There is no transition between the buildings fronting either street and this large structure, except for the space between each. Abutting and within historic streetscapes, it is inconsistent with historic building patterns and the existing character of the area.

3. Traffic on roads and highways in the vicinity;

No specific traffic information has been provided for this sketch plan review; however, a comprehensive traffic analysis will be required with preliminary plat application. That analysis must include existing and proposed trip generation figures and examine likely impacts on the UVM Medical Center intersection, where the weight of traffic is anticipated.

4. Bylaws then in effect;

It is premature to determine if there is full compliance with all applicable bylaws at this time in review. When more information has been provided an assessment can be better accomplished.

5. Utilization of renewable energy resources;

No information has been provided with respect to the utilization of renewable energy resources.

6. Cumulative impacts of the proposed use;

Residential attached dwellings – Mixed Use is a Conditional Use in the Institutional Zone. An assessment of potential impacts with this relatively large scale residential development will need to be analyzed; however as residential use is permitted in this zoning district, the cumulative impact of housing may be deemed negligible.

7. Functional family;

Regulation relative to Functional Family provisions of the ordinance do not apply in the Institutional zoning district.

8. Vehicular access points;

Access is proposed to be introduced at the UVM Medical Center traffic light, with additional access/egress between 70 and 72 Colchester Avenue. Some discussion is appropriate about the potential for egress only at the westerly point. See Section 6.2.2 (i) for further discussion.

9. Signs;

No signage is included in this proposal. Signs will require separate zoning permits.

10. Mitigation measures;

The interior development will not likely have measureable impact on Colchester Avenue; however the building's size and intensity of use will bring increased lighting, vehicular traffic, demands for refuse and recycling, water and sewer capacity, and stormwater/water infiltration concern. Each of these will need to be addressed at the time of application.

11. Time limits for construction;

No time limits for construction have been specified in this sketch plan submission. Zoning permits are valid for 2 years; if development is likely to extend beyond that time frame, a phasing schedule is recommended to allow for occupancy of part of the building as the project continues. As this abuts residential properties, hours of construction will likely be defined by the Development Review Board.

12. Hours of operation and construction;

For residential use, hours of operation do not need to be defined. Hours of construction are typically approved for 7:30 am – 6:00 pm Monday through Friday, with Saturday hours limited to interior work. This will be at the discretion of the Development Review Board.

13. Future enlargement or alterations;

In the event of future enlargement or alteration, permits would be required and reviewed under the regulations then in effect.

14. Performance standards;

Performance standards relating to outdoor lighting and erosion control are addressed under Article 5 of these findings.

15. Conditions and safeguards;

Not applicable for sketch plan.

(b) Major Impact Review Standards

1. Not result in undue water, air, or noise pollution;

No stormwater management details have been provided. A comprehensive stormwater management plan will be required with preliminary plat application. Review by the Conservation Board and the Stormwater Administrator will be required.

As the proposed use (aside from Colchester Avenue medical offices) is exclusively residential, no undue air or noise pollution is anticipated.

2. Have sufficient water available for its needs;

Written assurance from the city water engineers of adequate water and sewer capacity will be a requirement during application review.

3. Not unreasonably burden the city's present or future water supply or distribution system;

An assessment of city water engineers will be critical to understanding demand and capacity. See Section 3.5.6 (a) 1.

4. Not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;

An erosion prevention and sediment control plan in compliance with Chapter 26, Wastewater, Stormwater, & Pollution Control will be required with preliminary plat application. It will be subject to review and approval by the Stormwater Administrator.

5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;

See Section 3.5.6 (a) 3.

6. Not cause an unreasonable burden on the city's ability to provide educational services;

The specific unit sizes and anticipated bedroom count have not been provided; however preliminary discussions with the developer suggest small units intended to serve a professional population associated with area institutions. One bedroom apartments are less likely to have school age children; higher bedroom count increases the possibility. Unit types and bedroom counts must be specified with preliminary plat application. In any event, Impact fees will be paid to help offset impacts to the school system.

7. Not place an unreasonable burden on the city's ability to provide municipal services;

The proposed development will generate additional impacts on city services; however, the extent of those impacts cannot be determined at sketch plan review. All affected City Departments (Parks & Recreation, Fire, Police, Electric, CEDO, Planning & Zoning, School, and Public Works) will be notified and involved in the review of this project.

8. Not have an undue adverse effect on rare, irreplaceable or significant natural areas, historic or archaeological sites, nor on the scenic or natural beauty of the area or any part of the city;

See Section 5.4.8 and 6.2.2.

9. Not have an undue adverse effect on the city's present or future growth patterns nor on the city's fiscal ability to accommodate such growth, nor on the city's investment in public services and facilities;

The project seeks to utilize open space on the interior of multiple lots. There will be increased demands on city infrastructure; however the location is advantageous in its proximity to area institutions, travelways, and the downtown. Further analysis can be made upon application submittal, however early involvement with other city departments will identify and allow for consultation on specific infrastructure demands.

10. Be in substantial conformance with the city's municipal development plan;

It may be premature to identify specific areas of conformance with the MDP, but the following may be relevant:

- *Support the development of additional housing opportunities within the city, with concentrations of higher-density housing within neighborhood activity centers, the downtown and institutional core campuses. (MDP, Housing Plan, Page IX-1.)*
Technically, the project site is within the Institutional zone, not core campus, however.
- *.Provide a range of housing types that meet the needs and interests of the student population. These should include apartments that give students an opportunity to get away from the typical dormitory living situation. (MDP, Housing Plan, Page IX-11.)*
- *Addressing Parking and Circulation. Every effort should be made to provide parking either underground or within a structure to minimize the amount of land dedicated to surface parking. Additionally, traffic circulation patterns within residential neighborhoods and through the University campus must be evaluated to minimize through traffic off campus, and the need to use cars all together. (MDP, Housing Plan, Page IX-11.)*
- *Support the creation of new rental and owner-occupied housing on every parcel of land in Burlington that is zoned for residential development at the number of units allowed by zoning. Identify buildable sites for eventual housing construction/conversion. (MDP, Housing Plan, Page IX-12.)*

However, some areas of discussion remain:

- *Require that all city buildings, facilities, and infrastructure adhere to a **high standard of urban design**, public accessibility, and energy efficiency. (MDP, Community Facilities and Services Plan, Page VII-2.)*
- *Undertake an analysis to better understand the physical capacity of specific parts of the city to accommodate additional development. (MDP, Land Use Plan, Page I-30.)*
- *Embark(ing) on a greening program to replace unnecessary pavement with landscaping; encourage a diversity of open spaces accessible to each neighborhood including pocket parks and community gardens; the promotion of rooftop and wildflower gardens, and a network of paths and wildlife travel corridors. (MDP, Land Use Plan, Page I-25.)*
- *The challenge presented by the **Legacy Project Action Plan** will be to define the amount of future growth that is possible and desirable, and develop effective strategies to encourage future growth while retaining the scale and character of the city. (MDP, Land Use Plan, Page I-9.)*

11. Not have an undue adverse impact on the present or projected housing needs of the city in terms of amount, type, affordability and location;

The proposal is infill in undeveloped rear yards of existing adjoining neighborhoods. The proposed residences will moderately contribute to the city's housing stock. The specific size, type and affordability of the units are not known at Sketch Plan. The location is probably the most desirable feature; in close proximity to area institutions: UVM Medical Center, the university, and downtown.

12. Not have an undue adverse impact on the present or projected park and recreation needs of the city.

Modest impacts on the city's park and recreation needs are anticipated. Payment of impact fees will help offset such impacts. The project would be enhanced with on-site gardens or similar amenities for use of the immediate residents.

Article 4: Maps & Districts

(a) *Purpose: The Institutional District allows for an increased development scale and intensity than would typically be found in the adjacent residential districts to support continued growth and flexibility of the city's major educational and health care institutions within their respective institutional missions. New development is intended to be sensitive to the historic development pattern of the existing campuses as well as the surrounding residential neighborhoods.*

The district is intended to support broad range of related uses reflecting the resident institutions role as regional educational, health care, cultural and research centers. Buildings should be designed with a high level of architectural detailing to provide visual interest and create enjoyable, human-scale spaces. Sensitive transitions between adjacent lower scale residential areas and larger scale institutional development should be provided. Sites should be designed to be pedestrian friendly and encourage walking between buildings. Where parking is provided onsite, it is intended to be hidden behind, to the side, within, or underneath structures.

Table 4.4.4-1 Dimensional Standards and Density

Institutional District	Max. Intensity 20 du/acre 24 du/acre with IZ	Max. Lot Coverage 40% 48% with IZ	Building setbacks			Max. Height 35'
			Front ² Minimum 15'	Side ³ 10% of lot width, Min. 5', Max 20'.	Rear 25% lot depth, min. 20', max 75'	
Proposed development	8 existing / equivalent units + 79 new = 87. 87/3.62 acres = 24.03. Equals density allowed with IZ units.	28% proposed. This calculation seems to be inaccurate when compared to the site plan. The applicant will be required to break down coverage (building, parking, walkways, etc.) to confirm compliance.	No change to Colchester Avenue or Fletcher Place.	See com men ts below.	An argument can be made that there are only 2 frontages (Colchester Avenue and Fletcher Place); all other property boundaries would be side yards. The proposed parking, however, will meet a minimum 5' rear yard setback for parking.	Height has not been defined, but is limited to 35'.

* **There are significant problems with side yard setback measurements.** The plan illustrates a setback from the westerly property line of 66 **Colchester Avenue**, which has not been identified

as part of this application other than a reciprocal easement arrangement for parking access. The access drive/cul-de-sac meets no required setbacks. Original plans included the potential for shared use with 96 Colchester Avenue. Revised plans are unclear.

The merger of lots fronting on Colchester Avenue will alter setback requirements, as the lot will then become wider at that point. Side yard setbacks are required to be 10% of the lot width. Much conflict is present on the westerly side of the proposed structure relative to meeting that setback. It is also likely that there will be increased level of non-conformity, particularly as it relates to side yard setbacks for 94 Colchester Avenue. See Section 11.1.6.

Please review full size plan for ease of reading measurements and calculations for required side yard setback.

2. The calculation of the front yard setback shall be a percentage of lot width and depth or as defined and described in Article 5.

Section 4.4.4 (c) Permitted and Conditional Uses

Attached dwellings, multi-family is a conditional use in the Institutional Zone, per Appendix A.

Article 5: Citywide General Regulations

Section 5.2.3 Lot Coverage Requirements

See Table 4.4.4-1, above. The lot appears to exceed the 28% coverage as asserted on Plan SP-2. A breakdown of the coverage and confirmation will be required.

Section 5.2.4 Buildable Area Calculation

Although the combined parcels exceed the 2 acres threshold, they are within the Institutional Zone which is not subject to this criterion.

Section 5.2.5 Setbacks

See Table 4.4.4-1, above.

Section 5.2.6 Building Height Limits

Height is limited to 35', except under provisions of Section 5.2.6 (b). Elevations illustration a measurement of 34'10" to what appears as barrel roofs.

Section 5.2.7. Density and Intensity of Development Calculations

See Table 4.4.4-1, above.

Part 3: Non-Conformities

Section 5.3.5 Nonconforming Structures

(a) Changes and modifications:

Any change or modification to a nonconforming structure, other than to full conformity under this Ordinance, shall only be allowed subject to the following:

- 1. Such change or modification may reduce the degree of nonconformity and shall not increase the nonconformity except as provided below.*
- 2. Such change or modification shall not create any new nonconformity,*

The merger of lots fronting Colchester Avenue (72, 80 and 94) will create a larger lot width, increasing the required side yard setback. While it can be acknowledged that 72 Colchester Avenue currently extends over the property boundary and will remain so, 94 Colchester Avenue

will become non-conforming to side yard setback on the easterly boundary. 10% of the lot width at that location is approximately 19.5' (24'7", if 66 Colchester Avenue is included in the plan), the existing structure is about 10' from the property line. Therefore, lot merger will create new non-conformity relative to setbacks and therefore not in conformance with this standard.

Section 5.4.8 Historic Buildings and Sites

72, 80, and 94 Colchester Avenue, as well as 27 Fletcher Place are all listed on the Vermont State Register of Historic Resources. As the development is proposed for the interior of these combined parcels, the most significant concern may be that of compatibility, particularly in regard to massing and proportion.

(b) Standards and Guidelines:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

Each of these resources was constructed as a residential dwelling. The addition of new housing, in the rear of these combined parcels, will not alter the historic or current use of each structure.

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*

No alterations have been disclosed to 72, 80, 94 Colchester Avenue or 27 Fletcher Place. The roadway that is proposed to be the principle entrance to the development between 80 and 94 Colchester Avenue is currently an access to a parking area. Similarly, the driveway that separates 66 and 72 Colchester Avenue currently exists, but logically will experience a much greater intensity of use with this plan. The most significant change will be the introduction of a very large, elongated residential structure in the rear of the (proposed) combined lots. The structure will effectively remove most of the open space behind these older structures, and introduce a building of a much larger scale and mass than is in evidence on either the north side of Colchester Avenue or Fletcher Place.

3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

There is no proposal for conjectural features on any of the subject properties.

4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

For Sketch Plan, there has been no inclusion of alteration to the existing historic properties.

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

No changes to features or finishes are proposed.

6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials recognizing that new technologies may provide an appropriate alternative in order to adapt to ever changing conditions and provide for an efficient contemporary use. Replacement of missing features will be substantiated by documentary and physical evidence.*

No replacement of historic features is proposed.

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

No chemical or physical treatments are proposed for the historic buildings.

8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

As noted.

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment.*

Spatial relationships will be altered in that these included properties will no longer have the spacious rear yards they now enjoy. As an example of modern infill, the project provides an opportunity to examine what type of new construction may be attractive, functional, and compatible with the existing residential buildings. Essentially, the plan is to create an interior neighborhood, much as other developments have evolved from Colchester Avenue. Some examples might be Nash Place, Thibault Parkway, and even Fletcher Place itself.

A growing city utilized open area tangent to a major thoroughfare to expand residential opportunities; but each successfully created a nucleus neighborhood that was independent of, but related to neighboring development.

While the subject project proposal is clearly differentiated from the historic structures on the same parcel(s), it starkly contrasts in proportion, massing, and scale with its neighbors. Rather than discrete divisions between smaller residential structures that collectively would create a hamlet, this plan maximizes the buildout potential in a single, multi-story building. Surface treatment and material variation only superficially break up the large mass. The central access/cul-de-sac at the building entrance and adjacent on-grade parking give the experience of a drive up hotel rather than a residential enclave. Although the actual appearance from the public streets may not be discerned until modeling studies are done, the suggestion is that the building is out of scale, character, and proportion to be reasonably compatible with its abutting neighbors. Greater harmony and success would be found in several buildings of smaller proportion that would collectively resemble a collection of domestic scale residences rather than interstate lodging facilities. While potentially meeting dimensional limitations of the ordinance, the project does not meet this criterion of sensitive and compatible infill.

10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

It would be possible to consider the removal of a single large detached structure, so the project might be reversible.

Section 5.5.1 Nuisance Regulations

Nothing in the proposal appears to constitute a nuisance under this criterion. Lighting, however, will need to be examined for appropriateness and consistency with the standards of this ordinance.

Section 5.5.2 Outdoor Lighting

No information has been provided for lighting. Submission materials at the time of application must include a photometric for the entire site, fixture information with lumens and mounting height information. Lighting must meet these standards for approval.

Section 5.5.3 Stormwater and Erosion Control

A stormwater management plan, and Erosion Prevention and Sediment Control Plan will be required for site development and must be approved in writing by the City Stormwater staff. Additionally, conditions will require compliance post construction with each approved plan prior to issuance of any Certificate of Occupancy.

Article 6: Development Review Standards

Part 1, Land Division Design Standards

Section 6.1.2 Review Standards

Several discrete parcels are suggested as merged together. A boundary line adjustment will be required simultaneously with the plan. The submitted revised site plan places setbacks from property lines on parcels that are not part of the analysis, i.e. 66 Colchester Avenue. (96 Colchester Avenue is suggested as playing a potential role in the discussion of shared access and parking.) These important details must be addressed prior to project review advancement. While a survey is not required at preliminary plat, the preliminary plans must nonetheless show exact boundary lines. A boundary survey by a VT licensed land surveyor must be provided prior to final plat review.

Part 2, Site Plan Design Standards

Section 6.2.2 Review Standards

(a) Protection of important natural features

There is a significant ravine to the north of the site, which the project development avoids. As no contours are provided on the plan, and no existing conditions landscaping has been submitted, little else can be inferred.

(b) Topographical alterations

As noted, more information is needed to understand how the site may be modified to accommodate the project.

(c) Protection of important public views

There are no important public views from or through the property.

(d) Protection of important cultural resources

See Section 5.4.8 (b).

(e) Supporting the use of alternative energy

No apparent alternative energy is incorporated into the project design. The proposed barrel roofs may foreclose the opportunity to use solar. An examination of the feasibility of solar (voltaic or hot water) is encouraged.

(f) Brownfield sites

The properties are not listed on the Vermont DEC Hazardous Waste Site.

(g) Provide for nature's events

A Stormwater Management plan, approved by the City Stormwater team will be required. Details for the proposed stormwater management system will be required prior to final plat approval.

A comprehensive erosion prevention and sediment control plan will be required at the time of application. As with the stormwater management, final details will be required prior to final plat approval.

No specific areas for snow storage have been identified on the site. This will be a requirement.

(h) Building location and orientation

Whether intended or not, the proposed development is large enough that it will essentially result in the establishment of a new neighborhood. The visible public streetscape along Colchester Avenue is an important component; however, equally important is the establishment of a well-defined built environment, functional open spaces, and interconnectivity between the new dwellings and the existing streetscape/sidewalks that connect physically and visually to Colchester Avenue and on a lesser note, Fletcher Place. Open space or common land is required as part of Article 11.

The CDO and Municipal Development Plan articulate a vision for vibrant city neighborhoods with a fabric of cohesive streetscapes and call for new neighborhoods to reflect this vision. The proposed development ambitiously attempts to reach density allowances on a unique plan to utilize undeveloped rear yards. While the efficacy and frugal nature of the plan is understood (especially in regard to expenses associated with access and building code) the project lacks an understanding of the importance of creating a neighborhood that is more than just the number of dwellings allowed.

(i) Vehicular access

Access to this inner site is proposed directly across from the UVM Medical Center, intending to utilize the existing traffic light. That access will allow use of existing interior parking behind 72 and 80 Colchester Avenue, and potential access to an existing driveway west of 72 Colchester Avenue. That secondary avenue is the direct path to the underground parking proposed for the

new building. It was suggested at an informal staff review that perhaps one of these access paths should be egress only; however the westerly path (next to 72 Colchester) appears now to be the only entrance to the underground parking. Please note that this lane is outside the boundaries of the properties that are included on the application. To utilize this path would require inclusion of 66 Colchester Avenue as part of the plan, or an easement or shared use access agreement between property owners. That is suggested in the April 13, 2015 email to staff.

(j) Pedestrian access

Sidewalks connect directly to those on Colchester Avenue, and circle a portion of the inner cul-de-sac. "Possible access easement" or work outside the boundaries of involved parcels must be resolved prior to final review.

(k) Accessibility for the handicapped

The project will have to meet ADA standards, as directed by the building inspector. An elevator is proposed to serve the entire building. H/C parking will be required, with identification, signage and access area. This should be more fully developed at the time of review.

(l) Parking and circulation

Parking is proposed under the building and on surface parking. The applicant will be obliged to meet the parking requirements of Table 8.1.8-1 of the CDO. The parking requirement for multi-unit attached dwellings in the Shared Use Parking District is 1/unit.

Circulation is proposed via an access drive at the traffic light on Colchester Avenue; proceeding to a cul-de-sac that connects to a surface parking area and a drop off at the building entrance. A second access is suggested west of 72 Colchester Avenue in what appears to be a shared use arrangement that will allow entrance to an underground parking area. As this crosses property boundaries, the applicant must demonstrate easement or other instrument to allow use of abutting parcels to provide the suggested access and circulation.

(m) Landscaping and fences

There is not enough information available at Sketch Plan to evaluate landscaping. A full landscaping plan will be required at the time of formal application.

(n) Public plazas and open space

While there are no formal public plazas included in the plan, it is appropriate to evaluate the availability of open space available for residents. North of the development site is inhospitable for open space amenities due to the challenging topography. There is a large expanse of open lawn that is identified for a surface parking lot, which would be better dedicated to gardens, picnic tables, clothes lines, or grounds dedicated to the enjoyment of the residents. Further exploration of similar opportunities is encouraged and will in fact be required, per Article 11.

(o) Outdoor lighting

See Section 5.5.2.

(p) Integrate infrastructure into the design

On-site utilities need to be undergrounded when practicable. Meters, utility connections, HVAC or similar mechanical equipment should be coordinated with the design of the building, and

grouped in a service court out of public view. All need to be illustrated on elevations and/or site plans to determine appropriateness of location and necessity of screening.

It would be preferable to integrate trash and recycling operations within the building rather than as a stand-alone on the west of the site. The location of recycling facilities will need to be identified as well.

It is doubtful that a single dumpster will be capable of handling the refuse of 79 new residential units. Any dumpster will be required to be enclosed on all four sides to prevent blowing trash; and must be screened from public view. Such enclosure, (if the trash is not relocated to the interior of the building) must have a defined plan at the time of submittal.

Part 3, Architectural Design Standards

Section 6.3.2 Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The existing structures behind which this building is proposed are 1-2 ½ stories; typical for the residential style buildings on the north side of Colchester Avenue and the west side of Fletcher Place. At three full stories with a barrel roof, this building has the potential to be significantly higher than the existing buildings that ring it; however modeling studies may alter that perspective. As there are no contour lines on the specific site itself, it is not possible to ascertain if the development is proposed on lower terrain than Colchester Avenue or Fletcher Place. The applicant is encouraged to prepare a modeling demonstration to illustrate the proposed building within the context of the site.

2. Roofs and Rooflines

Alternating barrel and flat roofs are proposed; the former not common and certainly not evident in neighboring residential buildings. The only remotely similar roof in the area is Gutterson Field House.

The flat roofs aligned with building openings on preliminary elevations (easterly main entrance, garage opening) which will prevent rapid snow slide into the path of residents or vehicles. The roof style, however, is likely to accelerate snow slide which may have an impact on available window openings/sunlight on the lower level.

3. Building Openings

Windows are orderly arranged across each façade. See note above about likely blockage of window openings if snow slides off roofs. The south elevation that faces Colchester Avenue has a disappointing window selection and arrangement, given the broad solar exposure. More generous window openings, to benefit from passive solar, are recommended.

The garage opening is not illustrated on the westerly elevation, and needs to be.

The north façade has no windows on the westerly side; unless this is a staircase or elevator area, windows would be welcome for residential use to admit as much light as can be retrieved on a winter day, and would afford a view of the natural area to the north.

(b) Protection of important architectural resources

See Section 5.4.8 (b).

(c) Protection of important public views

See 6.2.2 (c) above.

(d) Provide an active and inviting street edge

Until modeling studies are submitted, it is not clear how this building may appear from Colchester Avenue or Fletcher Place. Materials have not been defined, but appear to be at least a clapboard product and masonry veneer. A landscaping plan will help understand proposed ground plantings that will enhance the entrance and the site. The building does, however, appear to be more like a hotel structure than smaller residential dwellings characteristic within the context.

(e) Quality of materials

Unknown at present. More specific information will be expected at application.

(f) Reduce energy utilization

There is no information relative to energy efficiency of the proposed buildings. At a minimum, the buildings must comply with the city's current energy efficiency requirements.

(g) Make advertising features complimentary to the site

No advertising features are included in the proposal. Signs are subject to subject zoning permit review.

(h) Integrate infrastructure into the building design

No building mounted mechanical equipment or meters are noted on the elevation plans. Any rooftop equipment must be incorporated into an architectural feature as part of the overall project design. They may not simply be placed atop the roofs.

(i) Make spaces safe and secure

As a multi-unit building, the new structure should have an intercom system to maximize personal safety of the tenants. The Fire Marshal will need to approve a plan for site access.

Article 8: Parking

Section 8.1.8 Minimum Off-Street Parking Requirements

No submission of proposed parking count has been submitted, although the applicant has offered that 59 places are on the schematic design for the garage. 15 surface parking spaces are illustrated on the interior, with another 8 on the west of the site. The applicant indicates that are 30 surface spaces with room to add 6 more if needed. Where these 30 are located, and whether they are pre-existing is not known. Additional parking spaces are on 66 Colchester Avenue, which has not been identified as part of this application. They may currently be serving that medical office use. The applicant needs to clearly define the parameters of this project, the properties and the existing uses that are being included in the overall plan so an accurate parking requirement can be made.

In the Shared Use Parking District, 1 parking space is required for each dwelling unit. For 79 new residential units, 79 new parking spaces will be required.

A full calculation of available parking will be required (interior and surface) as well as a list of existing uses on all parcels so the parking requirement for existing and proposed uses can be deduced.

Section 8.2.5 Bicycle Parking Requirements

Table 8.2.5-1 defines the bicycle parking requirement as 1 per 4 units for long term storage, and 1 per 10 units for short term. For 79 new residential units, bicycle parking requirements would be 20 long term spaces, and 8 short term. These numbers may fluctuate depending upon the number of units. Bicycle parking meeting these requirements shall be illustrated on submitted site plan/floor plans, as appropriate.

Article 9: Inclusionary and Replacement Housing

Section 9.1.5 Applicability

As the proposed development includes more than 5 new dwelling units, it is subject to the inclusionary housing provisions of this Article. Fifteen percent of the total unit count must be inclusionary (Per Section 9.1.10, 15% of 79 is **12** dwelling units). The project would not meet the exemption from Inclusionary Housing within the Institutional Zone, as the proposed units are not being developed by an educational institution.

Approval from the manager of the city's Housing Trust Fund will be required. Any stipulations would be included as a condition of approval.

Section 9.1.15 General Requirements for Inclusionary Units

- (a) *In order to assure an adequate distribution of inclusionary units by household size, the bedroom mix of inclusionary units in any project shall be in the same ratio as the bedroom mix of the non-inclusionary units of the project.*

As noted. Additional provisions of Inclusionary standards, including gross floor area, interior amenities, marketing, and affordability will be required to meet the approval of the City's Housing Trust Manager.

Section 9.1.13 Additional Density and Other Development Allowances

As a covered project, it will be entitled to increases in the development allowances of the underlying zoning district. As per Table 4.4.4-1, Maximum intensity increases from 20 dwelling units/acre to 24; maximum coverage from 40% to 48%. The plans reflect those allowances.

Other possible allowances for the provision of Inclusionary Units may include:

- (c) 1. A waiver of up to 50% waiver of parking spaces as outlined in Article 8, Section 8.1.14,
2. A waiver of a portion of the impact fees associated with the Inclusionary Units, pursuant to the Art. 3, Part 3 Impact Fee Administration Regulations.

The applicant is encouraged to confer with the Housing Trust Fund Manager to confirm the number of required IZ units, and any alteration to Impacts Fees.

Sec. 9.1.18, DRB Review of Proposal for Phasing

If phasing of the project development is desired, the request shall be reviewed as a component of the initial project review and included in conditions of approval. A schedule setting forth the phasing of the required inclusionary units will need to be presented to the DRB for review and approval. If phasing is not included as part of the review process, no phasing of the inclusionary units shall be allowed.

Sec. 9.1.19, Timeline for Availability/Phasing of Inclusionary Units for Issuance of Certificate of Occupancy

Inclusionary units shall be made available for occupancy on approximately the same schedule as a covered project's market units, except that certificates of occupancy for the last 10% of the market units will be withheld until certificates of occupancy have been issued for all inclusionary units. If the project is to be constructed in phases, certificates of occupancy may be issued on a phased basis consistent with the conditions of approval per Section 9.1.18.

Article 10: Subdivision

Section 10.1.5 Lot Line Adjustments

*The intent of this section is to provide for an abbreviated review and approval process for the realignment of lot boundary lines between existing adjacent lots, **including the merger of lots**, where no additional lots are being created.*

A lot line adjustment shall not constitute a subdivision.

There is no subdivision of land included in this proposal. At least four parcels are proposed to be combined. As a major PUD, a boundary survey done by a Vermont licensed surveyor must be completed with the final plat application.

(c) Lot Line Adjustment – Administrative Decision:

An application may be denied for good cause based upon substantial evidence including but not limited to:

B. Such cases where the proposed adjustment will result in the creation of a non-conforming parcel or non-conforming buildings or structures or yard areas or any non-conforming dimensional standard.

As noted in Table 4.4.4-1, new non-conformity, or an increase in non-conformity would be introduced in the proposed plan relative to side yard setbacks; particularly evident on the easterly side of 94 Colchester Avenue. Required side yard setbacks for that zone are 10% of the lot width. At that point, the lot width is 195' (10% = 19.5') or if 66 Colchester Avenue is included, the lot width is 247', requiring the maximum setback of 20'. Therefore, the boundary line adjustment would be denied based upon creation of new non-conformity. See Article 11 for further discussion and requirement to meet setbacks along the periphery of the project.

Sec. 10.1.6 Sketch Plan Review

Whenever a subdivision is proposed that will create five (5) or more lots or dwelling units, the applicant shall submit sketch plans and data pursuant to Article 3, Section 3.2.1(c) Sketch Plan Review showing existing conditions within the site and its vicinity and the proposed layout and development of the subdivision prior to the preparation of any preliminary and/or final plats.

The current Sketch Plan Review meets this standard; however existing conditions are not separately and clearly articulated relative to topo contours and landscaping.

Section 10.1.18 Preliminary Plat Review

After sketch plan review if applicable, the applicant may submit an application for Preliminary Plat Review pursuant to requirements specified below and containing any additional information requested by the administrative officer after completion of the sketch plan review.

Refer to Section 10.1.8 (a) for Preliminary Plat Submission Requirements.

Article 11: Planned Unit Development

Section 11.1.5 Modification of Regulations

With the approval of the DRB, and subject to the limitations of Section 11.1.6, the density, frontage and setback regulations may be altered for a planned unit development. More than one principal use and more than one principal structure may be permitted on a single lot. At the discretion of the DRB the dwelling units may be of varied types including single detached, attached, duplex or apartment construction. Any proposed modifications of regulations shall be listed in a statement accompanying the plat submission and such modifications shall be subject to the provisions of Section 11.1.6 and Section 11.1.7.

Section 11.1.6, Approval Requirements

(a) Lot coverage requirements of the district shall be met

The coverage limit is 40% in the Institutional zone, but may reach 48% with bonuses. The plans note 28% coverage, which will need to be confirmed for combined involved parcels.

(b) The minimum setbacks required for the district shall be met

As noted previously, side yard setbacks are not compliant.

(c) The minimum parcel size shall be met if the project is located in a RL or RL-W district

Not applicable in the Institutional Zone.

(d) The project shall be subject to design review and site plan review of Article 3, Part 4

See Article 3 above.

(e) The project shall meet the requirements of Article 10 for subdivision review

See Article 10 above.

(f) All other dimensional, density, and use requirements of the underlying zoning district shall be met as calculated across the entire project

As noted, side yard setbacks are not compliant, and there is an increase in non-conformity relative to existing setbacks as proposed.

(g) Open space or common land shall be assured and maintained in accordance with the conditions as prescribed by the DRB

No open space is identified; rather, a surface parking lot is proposed east of the building site. This is the most advantageous location to introduce common land for the collective use of the intended residents.

(h) The development plan shall specify reasonable periods within which development of each phase of the planned unit development may be started and shall be completed. Deviation from the required amount of usable open space per dwelling unit may be allowed provided such deviation shall be provided for in other sections of the planned unit development.

A phasing schedule has not been requested or suggested. Any proposed phasing plan will need to be approved by the DRB as part of conditions.

(i) *The intent as defined in Sec. 11.1.1 is met in a way not detrimental to the city's interests;*
Sec. 11.1.1, Intent

(a) *Promote the most appropriate use of land through flexibility of design and development of land;*

The concept of developing underutilized area behind existing structures is a traditional method of infill and intensification of use where encouraged though the Municipal Development Plan. How that occurs, and how it might look will determine the appropriateness of the design within the context proposed. Given the current setbacks along Colchester Avenue, this plan demonstrates the challenge to combine lots and still comply with required setbacks of the zone.

(b) *Facilitate the adequate and economical provision of streets and utilities;*

The proposed new structure can reasonably be assured to be served by extended access road(s) within the site and public utilities.

(c) *Preserve the natural and scenic qualities of open space;*

The natural area/open space to the north will be retained and visible from many of the proposed residences within the new development. A proposal to add surface parking within the site eliminates an opportunity to meet the requirement for common area for the development, as required by Section 11.1.6 (g).

(d) *Provide for a variety of housing types;*

There has been no definitive description of housing types intended for the development. This will need to become clear if the project advances.

(e) *Provide a method of development for existing parcels which because of physical, topographical, or geological conditions could not otherwise be developed; and,*

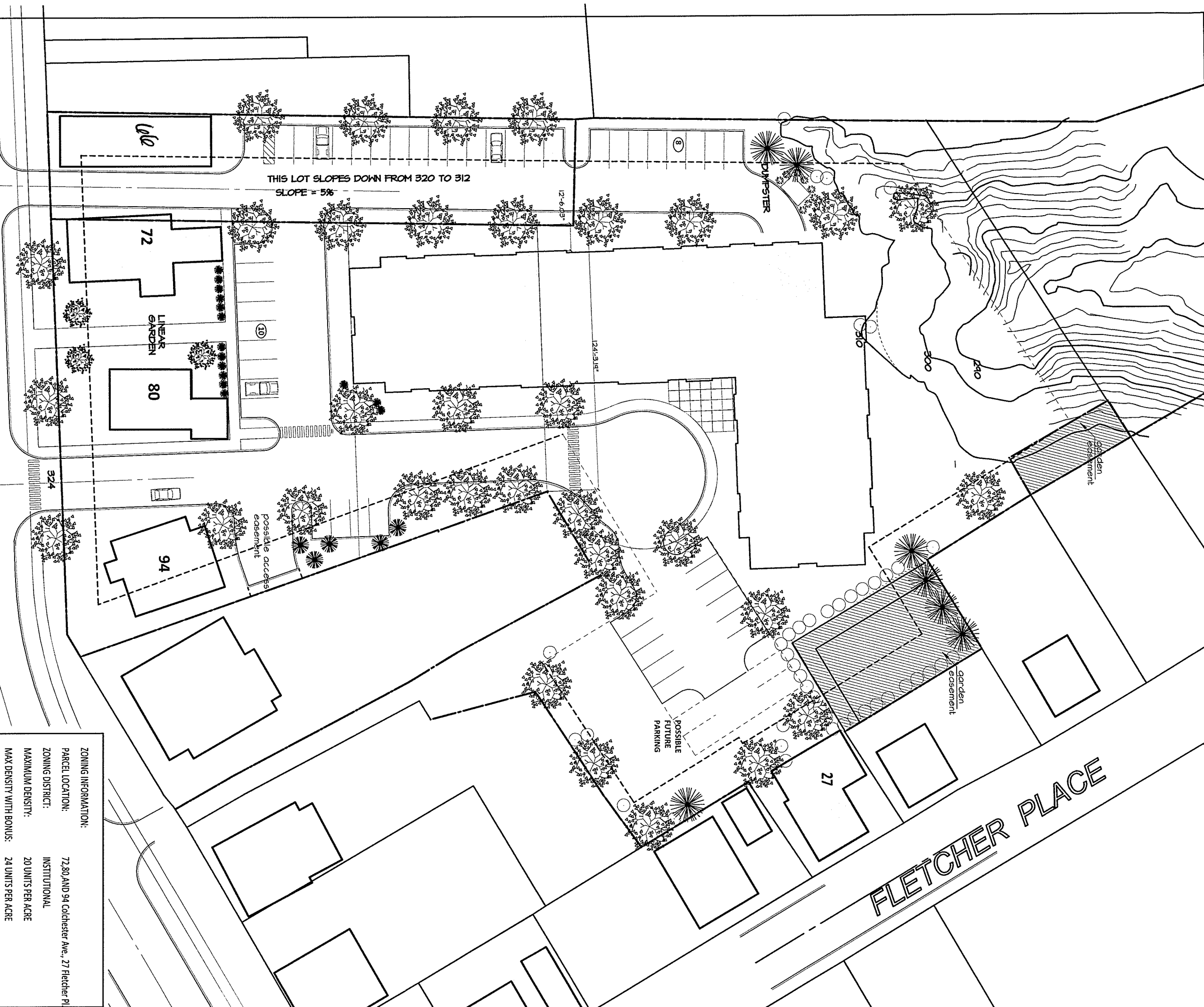
This standard does not strictly apply. The project area does not need to be developed, and it enjoys an existing amount of infrastructure, buildings and use. The ravine area to the north falls outside the development area.

(f) *Achieve a high level of design qualities and amenities.*

As conceptually proposed, the building design proposes maximizing the density buildout with a minimal amount of design inspiration. In context, massing and proportion, the building remains out-of-scale with its neighbors and irrelevant to the character of the area. Wall treatments, finishes, building openings and overall arrangement resemble a hotel. As there are no residential appurtenances like porches, patios, breezeways, gardens, play areas, or clotheslines, there are no identified commonly acknowledged amenities within the concept plan.

(j) *The proposed development shall be consistent with the Municipal Development Plan*
See Sec. 3.5.6 (b) 10.

NOTE: These are staff comments only. The Development Review Board, who may approve, table, modify, or deny projects, makes decisions.



THIS LOT SLOPES DOWN FROM 320 TO 312
SLOPE = 5%

COLCHESTER AVENUE

M.CH. V. ENTRANCE

FLETCHER PLACE

1 LANDSCAPE MASTER PLAN

SCALE: 1" = 20'-0"

ZONING INFORMATION:	
PARCEL LOCATION:	72,80, AND 94 Colchester Ave., 27 Fletcher Pl.
ZONING DISTRICT:	INSTITUTIONAL
MAXIMUM DENSITY:	20 UNITS PER ACRE
MAX DENSITY WITH BONUS:	24 UNITS PER ACRE
PARCEL SIZE:	3.62 ACRES / 157,687 SQUARE FEET
ALLOWABLE DENSITY:	87 UNITS
EXISTING DENSITY:	8 UNITS OR UNIT EQUIVALENTS
ALLOWABLE NEW DENSITY:	79 UNITS
MAXIMUM LOT COVERAGE:	40% / 63,075 SQUARE FEET
MAX. COVERAGE WITH BONUS:	48% / 75,690 SQUARE FEET
PROPOSED COVERAGE:	28% / 44,794 SQUARE FEET
SET BACKS REQUIRED:	FRONT YARD = 15 FT. SIDE YARD = 10% TO A MAX OF 20 FEET REAR YARD = 25% TO A MAX OF 75 FEET
MAX BUILDING HEIGHT:	35 FEET.

OPTIONAL MASTER PLAN

72,80,94 COLCHESTER AVENUE- 27 FLETCHER PL.

MILLER - VONTURKOVICH

BURLINGTON,

VERMONT



558 Hildburg Road
Suite 101
South Burlington, VT 05403
802.862.0222
rabideau.architects.com

PROJECT # 1412

SHEET NUMBER

SP-2

DATE: 11/11/2014

REVISIONS:	
GENERAL REVISIONS	DATE:
SINGLE BUILDING CONCEPT	11/25/14
SKETCH PLAN SUBMITTAL	3/9/2015
	3/19/2015

RECEIVED

MAR 20 2015

DEPARTMENT OF
PLANNING & ZONING

DATE: 03/19/15

REVISION:
SKETCH PLAN SUBMITTAL



① EAST ELEVATION
SCALE: 1/8" = 1'-0"



② SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATIONS

72,80,94 COLCHESTER AVENUE- 27 FLETCHER PL.
MILLER - VONTURKOVICH

VERMONT

BURLINGTON,

550 Lincoln Road
Suite 101
South Burlington, VT 05403
802.883.0272
Rabideau Architects.com



PROJECT # 1412

SHEET NUMBER

A201

DATE: 11/11/2014

RECEIVED

MAR 20 2015

DEPARTMENT OF
PLANNING & ZONING

DATE: 03/19/15

REVISION:

SKETCH PLAN SUBMITTAL

REVISION:

SKETCH PLAN SUBMITTAL

REVISION:

SKETCH PLAN SUBMITTAL

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REVISION:

SKETCH PLAN SUBMITTAL

REVISION:



① WEST ELEVATION
SCALE: 1/8" = 1'-0"



② NORTH ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATIONS

72,80,94 COLCHESTER AVENUE- 27 FLETCHER PL.

MILLER - VONTURKOVICH

590 Newbury Road
South Burlington, VT 05403
802.883.0222
rubideau-architects.com



PROJECT # 1412

SHEET NUMBER

A202

DATE: 11/11/2014



April 6, 2015

Mary O'Neil, AICP Senior Planner
Burlington Planning and Zoning
City Hall, 149 Church Street,
Burlington, VT 05401

Re: 72-94 Colchester Avenue - Von Turkovich Applicant

Mary,

Here are the answers to last week's questions:

1. How much square footage is proposed for new construction?

There are 19,556 square feet on each of three floors for a total of 58,668 gross leasable area. The garage level is also 19556 square feet.

2. Estimated construction cost – ballpark?

I base my estimates on the cost of construction per square foot of occupied space. The garage is included in the cost of construction, but the area is based on lease space. Based on a current comparable, I would estimate a total cost of construction including site development to be roughly \$120.00 per square foot or \$ 7,040160.00. Our final number may vary once we have conducted an actual estimate, so nothing is cast in stone right now.

3. Is there a working agreement for access west of 72 Colchester Avenue? Is 100 Colchester included in the plan?

Discussions are ongoing with several neighbors that include granting of various easements. The applicant proposes two easements to neighbors on Fletcher Place for garden space, will propose a access easement to the neighbor on the left of the project for access across their lot to the garage level, and possibly an access to the OB / GYN clinic to give them access to the traffic light.

I think until we are in complete agreement, I will modify the plan to show improvements on the subject property only. I do think it is desirable to look for ways to connect these lots, but not to the extent that it bogs down the application.

4. Number of parking spaces proposed internally? Surface? # h/c?

The current schematic garage plan shows 59 spaces in the enclosed garage. There are currently 30 surface spaces with room to add 6 more if needed. This will provide one parking space for each new dwelling unit, and leave 10 - 16 spaces for the existing uses. As you know, the applicant is in discussions with adjoining property owner to encourage better interior traffic flows and perhaps to allow some shared parking.

I hope this is what you are looking for. If you have any additional questions, I am always happy to hear from you.

Sincerely,

Greg Rabideau
Rabideau Architects

Mary O'Neil

From: Von Turkovich, Frank <FVonTurkovich@fvtlaw.com>
Sent: Monday, April 13, 2015 2:29 PM
To: Mary O'Neil
Cc: 'Greg Rabideau'
Subject: RE: Colchester Ave - VonTurkovich

Hi, Mary.

To follow-up on Greg's e-mail, I would also like to point out the following:

Building location has been shifted to allow compliance with the setback requirements from the adjoining properties (in particular, Colchester Ave., Randy Miller's dental office).

We will generate a reciprocal easement agreement, giving 66 Colchester Ave. the right to access the traffic light from its parcel and we will receive an easement allowing our traffic to use their driveway to reach the exterior and basement parking on the west side of our parcel.

As Greg said, we will hopefully be able to enter into a cooperative agreement with our neighbors at 96 Colchester Ave. (OB/GYN Associates) that would allow us to make better use of the rear portion of their parking lot and our adjoining property to the east. For now, as Greg points out, we want to submit a plan that complies with the dimensional requirements of the regulations.

We have talked about the exterior elevations. What was submitted was intended to open up a discussion about how the building should look. We are not wedded to any particular approach yet, and will be interested to hear what the DRB and planning staff has to say about what style would be most welcome. We look forward to your comments and ideas that will be discussed at the sketch plan meeting.

We are happy to meet with you prior to the meeting if you would like to do that.

Please feel free to call me with any questions.

Thanks.

Frank

Please reply to: fvonturkovich@fvtlaw.com

Frank von Turkovich
LAW OFFICES OF F.J. VON TURKOVICH, PC
One National Life Dr., M-230
Montpelier, VT 05604

Telephone: (802) 229-3431
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Mobile: (802) 578-2536

Attachments to this e-mail may have been encrypted to protect certain types of confidential information. If you have difficulty opening any attachments, please call the telephone number set forth above.

From: Greg Rabideau [<mailto:greg@rabideau-architects.com>]
Sent: Monday, April 13, 2015 12:06 PM
To: 'Mary O'Neil'
Cc: Von Turkovich, Frank
Subject: Colchester Ave - VonTurkovich

Mary,

In order to simplify the application, I have modified the attached site plan to eliminate overlap with Affiliates in ObGyn Care at 96 Colchester Avenue. I know that the applicant is still pursuing opportunities to collaborate with their neighbors, but
Until a deal emerges, I want the application to reflect the property as owned. Note. We are preserving a sp connect in the future on the applicants land only, stopping the pavement 5 feet from the PL to preserve a b if required.

Gregory Rabideau AIA, AP
Rabideau Architects
550 Hinesburg Road, Suite 101
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802-863-0222
greg@rabideau-architects.com

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Department of Planning and Zoning

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David E. White, AICP, Director
Ken Lerner, Assistant Director
Sandrine Thibault, AICP, Comprehensive Planner
Jay Appleton, Senior GIS/IT Programmer/Analyst
Scott Gustin, AICP, CFM, Senior Planner
Mary O'Neil, AICP, Senior Planner
Anita Wade, Zoning Clerk
Elsie Tillotson, Department Secretary



MEMORANDUM

To: Development Review Board
From: Ken Lerner *[Signature]*
Date: April 21, 2015
RE: 404 College Street, ZP15-0868CU

Note: These are staff comments only. Decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

File: ZP15-0656 CA/MA
Location: 404 College Street
Zone: RH **Ward:** 2

Date application accepted: March 11, 2015

Applicant/ Owner: Dunlap Riehle

Request: Change of use from duplex to a single residential unit and boarding house in the second unit.

Background:

- Zoning Permit 77-752; to erect a 40' x 112' apartment house. This appears to be the incorrect address as the subject building was built in 1844.
- Zoning Permit 91-303; construct retaining wall. April 1991. Permit expired.
- Zoning Permit 95-391; fence. Approved April 27, 1995.
- Zoning Permit 01-333 / COA 02-11; Change of use from fraternity to duplex; each unit with four bedrooms. Approved March 8, 2001.
- Zoning Permit 06-464CA; Site modifications to previous approval (Zoning Permit 01-333 / COA 02-11) not to reduce parking. Approved March 20, 2006.
- Zoning Permit 06-465FC; fence and trash bin enclosure. Approved February 16, 2006.
- Zoning Permit 06-731CA; Revised parking configuration and construct patio and walkway. Parking to be white crushed gravel and patio and walkway to be slate. Approved June 6, 2006 (06/06/06)

Overview: The structure is known as the Captain Daniel Lyon House (c. 1844), and is listed on the National Register of Historic Places within the Main Street College Street Historic District. The building is the former Acacia Fraternity house that was converted into two residential units with occupancy of four bedrooms in each unit (Zoning Permit 01-333 / COA 02-11). The current

request is to convert one of these six bedroom units into a boarding house unit with occupancy of the six rooms. The owner will live on the premises intending to occupy the unit that does not contain the boarding rooms.

Recommendation Approval as per the following findings and conditions:

I. Findings:

Section 3.5.6 Review Criteria

The application and supporting documentation submitted for proposed development involving Conditional Use and/or Major Impact Review, including the plans contained therein, shall indicate how the proposed use and associated development will comply with the review criteria specified below:

(a) Conditional Use Review Standards: Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on the following general standards:

1. The capacity of existing or planned community facilities;

This is an existing high density residential area. This is a large building and the number of rooms occupied will increase from eight (four/unit) to ten (four in one unit and six in the other). The increase in the number of occupied rooms should ultimately pose no adverse impact to existing or planned community facilities. **Affirmative finding.**

2. The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;

As there are no exterior or interior modifications to the building or site proposed the occupancy of two additional rooms in the existing large building in this high-density residential district would not change the character and specified intent of the zoning district.

Previous application, Zoning Permit 01-333 /COA 02-11, was approved with the understanding that there would be multiple roommates and require adequate parking counts. This proposal is answering the demand for housing that has become a recent focus; finding residential options for individuals that wish to live close to where they work and play. The change to boarding use and increase in the bedroom occupancy count is an exception to the change to the Functional Family Housing provision, which now extends into the RH zone. summary.

From the MDP:

- *Support housing models, organizations, and programs that insure perpetual affordability, fill gaps in the housing tenure ladder, and increase the overall supply of housing the community. (Municipal Development Plan, Housing Plan, Page IX-2.)*
- *Support the development of additional housing opportunities within the city... (Municipal Development Plan, Housing Plan, Page IX-1.)*

- *Retain [Burlington's] moderate scale and urban form in its most densely developed areas, while creating opportunities for increased densities. (MDP, Page III-1.)*

Affirmative finding.

3. *Traffic on roads and highways in the vicinity evaluated in terms of increased demand for parking, travel during peak commuter hours, safety, contributing to congestion, as opposed to complementing the flow of traffic and/or parking needs; if not in a commercial district, the impact of customer traffic and deliveries must be evaluated;*

The proposal represents that the existing parking configuration will be maintained. As the current use of the parking lot does not conform to the parking plan approved in 2006; see approved site plan and 2012 aerial photo, this needs to be addressed. Also refer to discussion under 4 and Article 8, below. **Affirmative finding as conditioned.**

4. *Any standards or factors set forth in existing City bylaws and city and state ordinances;*

The zoning district and the City Master Plan support increased residential use in the RH zone.

The boarding house use itself is not in conflict with City bylaws or state ordinances; however it must meet any life safety requirements that may be triggered as a result in the change of occupancy. However, the approved parking lot configuration does not conform to the actual parking occurring on site. In addition, while not directly related to the boarding house it appears that replacement windows have been installed without the benefit of zoning permits. This will be referred to Code Enforcement for investigation. **Affirmative finding as conditioned.**

5. *The utilization of renewable energy resources*

No part of this application will prevent the use of wind, solar, or water energy sources.

Southerly exposure will complement the rear access/lobby for residential use. **Affirmative finding.**

and,

In addition to the General Standards specified above, the DRB;

6. *shall consider the cumulative impact of the proposed use. For purposes of residential construction, if an area is zoned for housing and a lot can accommodate the density, the cumulative impact of housing shall be considered negligible;*

The parcel is zoned for high density residential housing, and can accommodate the proposed occupancy. The cumulative impact must be considered negligible. **Affirmative finding.**

7. *in considering a request relating to a greater number of unrelated individuals residing in a dwelling unit within the RL, RL-W, RM and RM-W districts than is allowed as a permitted use, in addition to the criteria set forth in Subsection (a) hereof, no conditional use permit may be granted unless all facilities within the dwelling unit, including bathroom and kitchen facilities are accessible to the occupants without passing through any bedroom. Additionally, each room proposed to be occupied as a bedroom must contain at least one hundred twenty (120) square feet. There must also be a parking area located on the premises at a location other than the front yard containing a minimum of one hundred eighty (180) square feet for each proposed adult of the dwelling unit in excess of the number of occupants allowed as a permitted use. All other green space standards must be observed.*

Zoning Amendment ZA-13-01 extended the Functional Family provisions of the ordinance to the RH district. *In all residential districts except the RH district, the occupancy of any dwelling unit is limited to members of a family as defined in Article 13.*

No new units are being created although occupancy of one unit is changing from a four bedroom occupancy to a 6 room boarding use. **Affirmative finding.**

8. may control the location and number of vehicular access points to the property, including the erection of parking barriers.

The proposal intends to utilize the existing vehicular access point off Williams Street. The parking barriers, planters and bollards, as approved are not in place. The bollards are in a different location and are moveable posts set in a concrete base connected simply by a single strand of rope. The planters are pots lined up along the east side of the house. The whole parking lot appears disorganized with vehicles haphazardly parked on the site. Neither the “picnic area” nor the walkway indicated on the site plan is evident. This needs to be resolved as the current situation is not in compliance with approved 2006 site plan, and is unacceptable. **Affirmative finding as conditioned.**

9. may limit the number, location and size of signs.

No signs proposed. Any signage will require a separate sign permit. **Not applicable.**

10. may require suitable mitigation measures, including landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area.

The parking area and the building itself have not been maintained in good repair as this historic site deserves. The applicant has submitted the approved site plan (dated 6/18/2006) with a picnic area, walkway, landscaping, planters, and bollards that have not been implemented as approved. A fence was also approved but it too is in some disrepair. In order, not only to mitigate the increase in the use of the property, but to bring it into compliance with the approved site plan measures are needed to insure reliable parking in the future. **Affirmative finding as conditioned.**

11. may specify a time limit for construction, alteration or enlargement of a structure to house a conditional use.

The Comprehensive Development Ordinance Section 3.2.9 (d) affects a two year time limit on project completion. **Affirmative finding as conditioned.**

12. may specify hours of operation and/or construction to reduce the impact on surrounding properties.

Any exterior changes required for improving the parking area are allowed to be constructed Monday through Friday 7am to 6 pm with a limit on weekend hours (Saturday 9 am to 5 pm for interior work only.) **Affirmative finding as conditioned.**

13. may require that any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions.

This is a statutory requirement. **Affirmative finding as conditioned.**

14. may consider performance standards, should the proposed use merit such review.

Hours of construction are proposed to be limited. In addition, the parking lot needs to be improved and function in an organized manner. Any other performance standards would be at the discretion of the DRB. **Affirmative finding as conditioned.**

15. may attach such additional reasonable conditions and safeguards, as it may deem necessary to implement the purposes of this chapter and the zoning regulations.

Conditions are proposed as indicated under the appropriate findings to address compliance with approved plans, and referrals to Code for potential violations. **Affirmative finding as conditioned.**

Article 4: Maps and Districts

Section 4.4.5 Residential Districts

Boarding House⁶ (5 persons or more) is a Conditional Use in the RH district. Footnote 6 requires owner occupancy. Owner occupancy is defined as: *Where owner occupancy is required by this ordinance, owner occupancy shall mean occupancy of premises by an owner for at least 50% of the year. (CDO Article 13.)* The applicant/owner is proposing to live on the premises in the non-boarding house unit. **Affirmative finding as conditioned.**

Article 5: Citywide General Regulations

Part 2: Dimensional Requirements

Section 5.2.1 Existing Small Lots

Not applicable.

Section 5.2.2 Required Frontage or Access

The lot has access to a public road. (College Street.)

Affirmative finding.

Section 5.2.3 Lot Coverage Requirements

No additional lot coverage is proposed. **Not applicable.**

Section 5.2.4 Buildable Area Calculation

Not within the RCO, WRM, RM, WRL or RL zoning district. **Not applicable.**

Section 5.2.5 Setbacks

No changes to setbacks are proposed. However, any modification to the parking area will need to respect minimum setback requirements. **Affirmative finding as conditioned.**

Section 5.2.6 Building Height Limits

No change to building height is proposed. **Not applicable.**

Section 5.2.7 Density and Intensity of Development Calculations

No change to density is proposed; remains two units. **Not applicable.**

Part 4: Special Use Regulations

Section 5.4.8 Historic Buildings and Sites

404 College Street is on the National Register of Historic Places, within the Main Street College Street Historic District.

As there are no changes propose for the structure itself this section is **not applicable**. However, as noted there were some changes that were undertaken without approvals and this will be referred to Code Enforcement for investigation.

Article 6: Development Review Standards

PART 2: SITE PLAN DESIGN STANDARDS

The applicant is not proposing any exterior changes and is relying on an already approved site plan. However, this site plan has not been implemented as approved. With the change in occupancy parking lot improvements appear to be needed.

Section 6.2.2 Review Standards

(a) Protection of Important Natural Features:

No natural features. **Not applicable.**

(b) Topographical Alterations:

No topo changes. **Not applicable.**

(c) Protection of Important Public Views:

There are no publically accessible views. **Not applicable.**

(d) Protection of Important Cultural Resources:

No changes to the historic building are proposed. However, as observed the building is somewhat in disrepair and unapproved windows have been installed. This will be referred to Code Enforcement for investigation. **Not applicable**

(e) Supporting the Use of Renewable Energy Resources:

No part of this application will preclude an opportunity to use direct sunlight, solar, wind, or geothermal; all of which are encouraged. **Affirmative finding.**

(f) Brownfield Sites:

None identified.

(g) Provide for nature's events:

The proposed condition to improve the parking lot may require a Small Project Erosion Prevention & Sediment Control Plan. **Affirmative finding as conditioned.**

(h) Building Location and Orientation:

No changes to the building are proposed. **Not applicable.**

(i) Vehicular Access:

There is no change proposed to the vehicular access. The existing curb cut and driveway will be utilized. The applicant is proposing to locate a dumpster at the northeast corner of the parking lot. There does not appear to have been any scaling or details of the exact location. It must be a minimum of five feet from side property line and cannot occupy a required parking space. Also it needs to be screened. A revised site plan of professional quality and to scale is needed to determine how parking and trash removal will operate. **Affirmative finding as conditioned.**

(j) Pedestrian Access:

Pedestrians shall be provided one or more direct and unobstructed paths between a public sidewalk and the primary building entrance. Well defined pedestrian routes shall be provided through parking areas to primary building access points and be designed to provide a physical separation between vehicles and pedestrians in a manner that minimizes conflicts and improves safety. Where sidewalks and driveways meet, the sidewalk shall be clearly marked by differentiated ground materials and/or pavement markings.

There is an existing pedestrian walkway to the building from College Street. A walkway is delineated on the 2006 site plan but does not exist on the site. This is needed and should be added in detail to the required site plan. **Affirmative finding as conditioned.**

(k) Accessibility for the Handicapped:

Special attention shall be given to the location and integration of accessible routes, parking spaces, and ramps for the disabled. Special attention shall also be given to identifying accessible access points between buildings and parking areas, public streets and sidewalks. The federal Americans with Disabilities Act Accessibility Guidelines (ADAAG) shall be used as a guide in determining the adequacy of the proposed development in addressing the needs of the disabled.

The property will need to meet any ADA compliance as may be required. **Affirmative finding as conditioned.**

(l) Parking and Circulation:

The parking area is existing. However, as noted throughout these comments it has not been implemented as approved, nor has it functioned as anticipated. The “existing” parking and a site visit confirmed the haphazard nature of the parking area and the inconsistency of the “improvements”. The parking spaces are not defined and need to be.

All parking areas shall provide a physical separation between moving and parked vehicles and pedestrians in a manner that minimizes conflicts and gives pedestrians a safe and unobstructed route to building entrance(s) or a public sidewalk.

The pedestrian walkway illustrated on the approved plan between the parking area and the building is non-existent. A walkway differentiation from the parking area needs to be provided and indicated on the site plan. **Affirmative finding as conditioned.**

(m) Landscaping and Fences:

Landscaping/planting is shown on the 2006 plan. The current site conditions need to rethink these details and improve the provision of landscaping. **Affirmative finding as conditioned.**

(n) Public Plazas and Open Space:

No public open space proposed. **Not applicable.**

(o) Outdoor Lighting:

Where exterior lighting is proposed the applicant shall meet the lighting performance standards as per Sec 5.5.2.

No indication of any proposed lighting has been provided. If any lighting fixtures are to be placed on site details and photometrics are needed to assure appropriate light levels and compliance with Sec. 5.5.2. **Affirmative finding as conditioned.**

(p) Integrate infrastructure into the design:

A dumpster is proposed but merely noted by an arrow on the northeast of the parking area. This is insufficient detail and the dumpster location dimensions and screening (required) must be provided. It cannot be located within a setback nor can it usurp a parking space. There is no enclosure defined, and needs to be. **Affirmative finding as conditioned.**

Article 8: Parking

Parking (site within a Neighborhood District) for the property with the proposed boarding house is calculated as follows:

Required

2 units x 2 spaces =4;

Six boarding rooms (1 per 2 beds) =3

Total of 7 parking spaces required

Provided

10 are illustrated on the 2006 approved site plan.

While 10 spaces meet the requirement, there are some concerns:

- Four spaces (two x two) are in tandem. **Section 8.1.14 (b)** addresses tandem parking allowing tandem parking for duplexes; however, as this proposal modifies the duplex use and results in six rooms rented to six individuals, tandem parking is not appropriate. As there are eight spaces that are not tandem this plan is only acceptable as long as the parking lot operates as approved. However, this has not occurred and the resulting problem is considered below.
- The lack of organized parking occurring on site must be addressed. With the increase in occupants whereby six unrelated individuals will be living in one unit, there is greater need for the parking lot and useable spaces to be clearly defined. This has not occurred in the past, thus it is recommended that, in order for the lot to operate effectively, the parking area should be paved and all parking spaces clearly striped. In addition, each occupant who has a vehicle must have an assigned space. All required barriers as illustrated on the approved site plan must also be installed to prevent continued

unorganized parking. A revised site/parking plan may be considered to meet these concerns as well. **Affirmative finding as conditioned.**

Section. 8.2.5 Bicycle Parking Requirements

Table 8.2.5-1

Requirement per CDO	Residential Housing Living, multi unit, 1 per 4 units Long Term; 1 per 10 units Short term.
---------------------	---

While bicycle parking is not required, it is suggested that the applicant provide long-term and short term bike parking. **Affirmative finding.**

II. Conditions of Approval

1. **Prior to release of the zoning permit**, the applicant shall provide evidence that all items illustrated on the approved site plan have been installed and that a permit has been obtained for the parking lot. The lot shall be paved & striped to assure all parking occurs in an organized manner. As an alternative, revised site/parking plan may be submitted and a zoning permit obtained that meets the parking requirements of the CDO; subject to review and approval by staff. This plan shall include the following:
 - a. landscaping, barriers or other techniques that insure there will be organized and clearly defined parking on the site;
 - b. provide for a pedestrian walkway, (the approved walkway is not evident on the ground). The pedestrian walkway shall be differentiated, other than typical striping.
 - c. details of the location for the dumpster and its enclosure shall be included.
 - d. a Small Project Erosion Prevention & Sediment Control Plan to be provided if required.
 - e. any short term bicycle parking racks shall be illustrated and detailed
2. Any occupants with vehicles shall be assigned specific a parking space.
3. Hours for any construction related to exterior work (the parking lot) is limited to Monday through Friday 7am to 6 pm with a limit on weekend hours (Saturday 9 am to 5 pm for interior work only).
4. If there are any exterior lighting fixtures proposed, they need to be detailed and photometrics included to assure appropriate light levels and compliance with Sec. 5.5.2.
5. The property will need to meet any ADA compliance as may be required.
6. Standard Permit Conditions 1-15.

NOTE: These are staff comments only. The Development Review Board, who may approve, table, modify, or deny projects, makes decisions.

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MAR 11 2015

Dunlap B Riehle
404 College Street
Burlington, VT

DEPARTMENT OF
PLANNING & ZONING

Burlington Planning and Zoning
City Hall
Burlington, VT

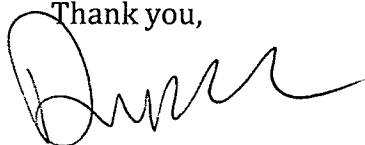
March 10, 2015

Along with the proposal to utilize the rear portion of the building as a boarding the current parking configuration will be maintained. Previously approved as a 10-space double loaded perpendicular to south Williams.

Using a combination of bollards to avoid creep, and round flower planters for aesthetic beauty the layout is practical during both summer and winter months. The walkway and patio areas have been maintained as a combination of mowed grass and white gravel. Covering these areas with slate as previously suggested proved impractical for the constant winter plowing, and the cost was too expensive. Several picnic tables occupy the patio space, and encourage use of that area. One addition is the installation of two (4x10) vegetable raised beds located at the eastern end of the walkway area.

For many years now because of the low occupancy in the rear part of the building there hasn't been the need for an on site dumpster or trash barrels. With the proposed increase of usage I believe a site will need to be once again designated. The most practical would be the northeast most corner of the parking area where the existing white lattice would block it from the street view. I am open to suggestions regarding their location.

Thank you,



Dunlap Riehle

Planning & Zoning

147'-0"

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PLANNING & ZONING

FROM THESE PLANS
NO CONSTRUCTION,
OR DETAILING ARE
APPLICANT/OWNER.

QUALITY

DATE

DEPARTMENT
OF PLANNING & ZONING

2006 approved

(APT A)
6 BEDROOMS
@ 6000 S.F.

4 occupiable

(APT B)
6 BEDROOMS
@ 3000 S.F.

proposed
boarding
house

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18 2006

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PLANNING & ZONING

Gate

Walkway

PICNIC
Area
20x20

Raised
Beds

Raised
beds

Flower
planter
bollards

planter

56

18

18

20

18

41

58

41

48

1'-0"

SOUTH WILLIAMS STREET

83' →

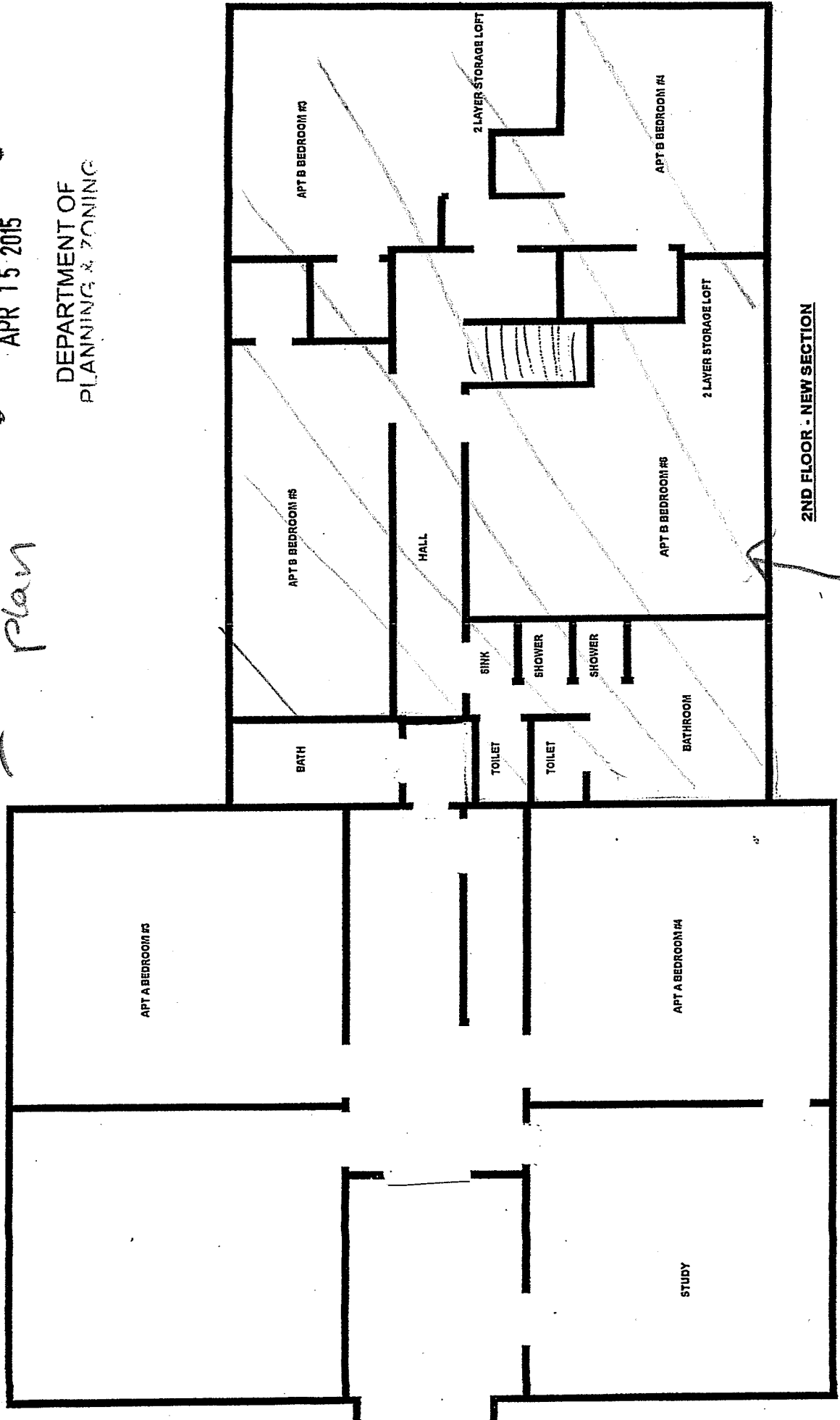
Two

404 College SE
2ND Floor
Plan

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2ND FLOOR - OLD SECTION

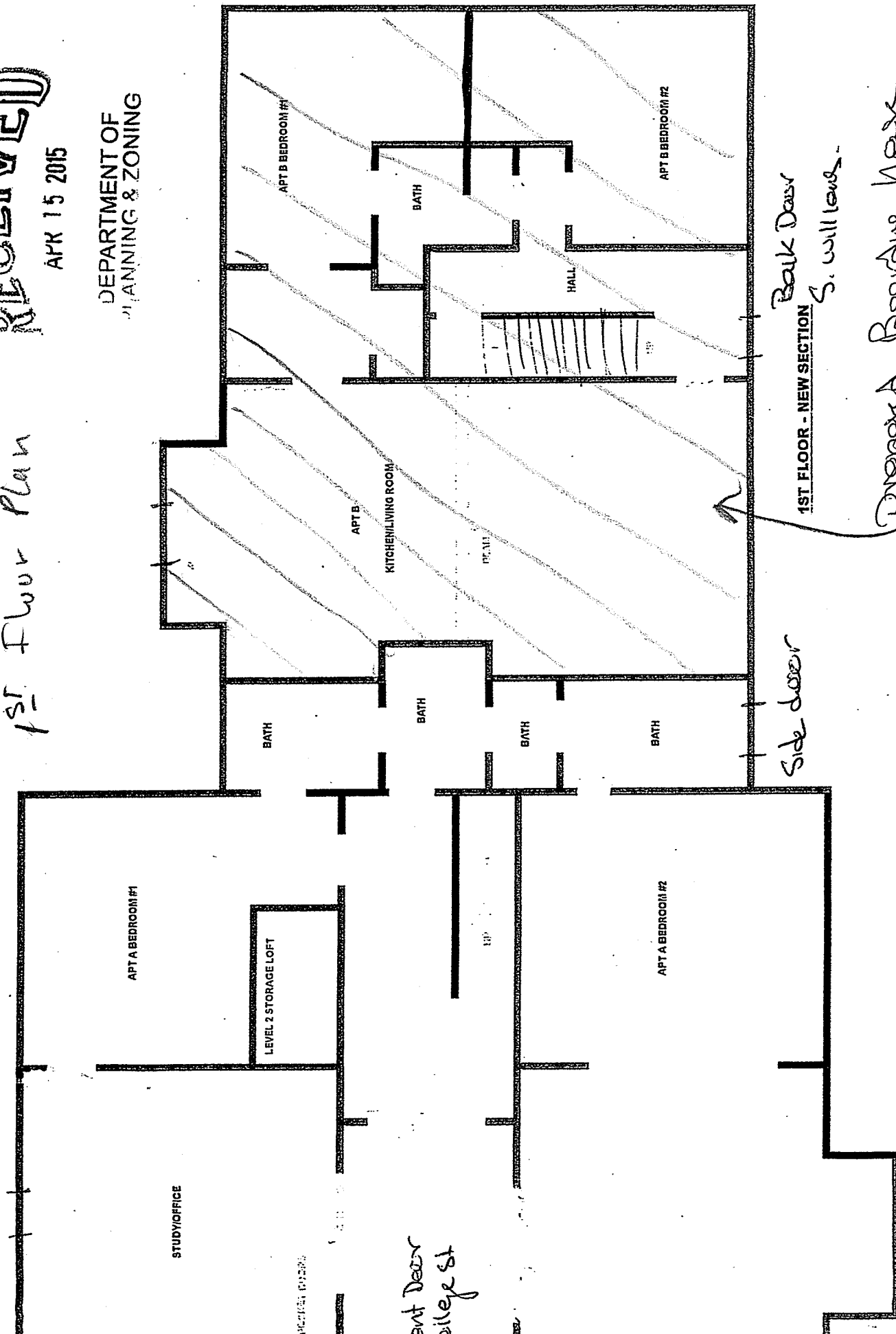
2ND FLOOR - NEW SECTION

Proposed Boarding House

1st Floor Plan

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APR 15 2015

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PLANNING & ZONING

1ST FLOOR - NEW SECTION
Back Door
S. will leave -

Proposed Boarding Work

1ST FLOOR - OLD SECTION



2012



Google earth

Google earth

feet
meters



Department of Planning and Zoning

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Ken Lerner, Assistant Director
Sandrine Thibault, AICP, Comprehensive Planner
Jay Appleton, Senior GIS/IT Programmer/Analyst
Scott Gustin, AICP, CFM, Senior Planner
Mary O'Neil, AICP, Senior Planner
Elsie Tillotson, Department Secretary
Anita Wade Weber, Zoning Clerk



MEMORANDUM

To: Development Review Board
From: Mary O'Neil, AICP, Senior Planner
Date: April 21, 2015
RE: ZP15-0881HO, 115 Glen Road

Note: These are staff comments only. Decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

File: ZP15-0881HO

Location: 115 Glen Road

Zone: RL **Ward:** 6S

Date application accepted: March 16, 2015

Applicant/ Owner: Danielle Rouleau / Ranjit Singh

Request: Home bakery within the accessory apartment.

Background:

- Zoning Permit 14-1044BA; Accessory apartment above garage of single family home. Approved May, 2014.
- Zoning Permit 14-0997BA; construct new single family house on existing vacant lot. Now identified as 115 Glen Road. Approved May, 2014.

Overview: The application requests a home occupation for a bakery within the accessory apartment unit of the existing single family home.

Recommendation: Consent approval, per the following findings and conditions:

I. Findings

Article 3: Applications and Reviews

Part 5, Conditional Use & Major Impact Review, Sec. 3.5.6 Review Criteria

The application and supporting documentation submitted for proposed development involving Conditional Use and/or Major Impact Review, including the plans contained therein, shall indicate how the proposed use and associated development will comply with the review criteria specified below:

(1) The capacity of existing or planned community facilities;

The programs and services of the City of Burlington are accessible to people with disabilities. For accessibility information call 865-7188 (for TTY users 865-7142).

The proposed home occupation will present no additional impacts on community facilities currently serving the residence. **Affirmative finding.**

(2) The character of the area affected;

The subject dwelling unit is a single family home on Glen Road. This is within a residential zoned (Low Density - RL) zone. The proposed home occupation is reserved to the kitchen of the accessory apartment, and appears to be low key in nature with no outside employees, customers deliveries of pick-ups proposed.

No adverse impacts on the character of the area are expected. **Affirmative finding.**

(3) Traffic on roads and highways in the vicinity;

As only the resident is proposed as an employee of the home occupation, no adverse impact is anticipated for traffic. **Affirmative finding.**

(4) Bylaws then in effect;

The home occupation if conditioned may comply with all applicable zoning bylaws. The applicant is advised to consult with the Office of the Assessor with regard to the Business Personal Property requirements. **Affirmative finding as conditioned.**

(5) Utilization of renewable energy resources;

No information has been provided with respect to the use of alternative energies. However, the proposed home occupation will not unreasonably deter the actual or potential use of renewable energies by the subject or neighboring properties. **Affirmative finding.**

(6) Cumulative impacts of the proposed use;

As understood, the proposed home occupation will not negatively impact traffic or have any discernible impacts on the neighborhood. **Affirmative finding.**

(7) Functional family;

This criterion does not apply to the subject permit request. **Not applicable.**

(8) Vehicular access points;

The home is accessed by an existing driveway. No changes to it are proposed. Sec. 5.4.6. (b) 6. limits the number of additional off-street parking to one space. As no customers or clients will come to the residence, the additional parking space is not required. **Affirmative finding.**

(9) Signs;

No exterior signs are proposed. **Not applicable.**

(10) Mitigation measures;

From submission information, the proposed home occupation will not generate any noxious effects such as noise, glare, or emissions. The applicant proposes the use of an existing kitchen to produce baked goods. As such, activities within the proposed area should not present any impacts different than normal household use.

There are no proposed outside changes to the existing residence that would affect the character of the surrounding area. **Affirmative finding.**

(11) Time limits for construction;
No construction is proposed. Not applicable.

(12) Hours of operation and construction;
Days/hours of operation apply solely to the owner/occupant working within their own residence. No evidence is anticipated from the exterior. **Affirmative finding.**

(13) Future enlargement or alterations;
Any future enlargement or alterations of the home occupation will require additional permit review per the regulations in effect at that time. **Affirmative finding as conditioned.**

(14) Performance standards;
The proposed use does not affect any items considered under performance standards such as nuisances, outdoor lighting, or erosion control. **Affirmative finding.**

(15) Conditions and safeguards;
Conditions of approval are included in effort to address potential undue adverse impacts to the surrounding area. The building inspector has jurisdiction over building code for new construction; if any interior alterations are required, his approval will be inherent in the issuance of any required building permits. **Affirmative finding as conditioned.**

Article 5: Citywide General Regulations

Part 4: Special Use Regulations

Sec. 5.4.6. Home Occupations

1. A home occupation shall be conducted solely by resident occupants plus no more than one additional full-time equivalent employee in RL and WRL districts and no more than two (2) full-time equivalent employees in other districts. The home occupation shall be conducted entirely within an existing dwelling unit and/or one enclosed accessory structure.

The applicant indicates the intent for one (owner) resident. The home occupation is proposed for 120 square feet, or the kitchen of the accessory unit. No outside employees are proposed. The property is within the RL zoning district. **Affirmative finding.**

2. No more than thirty-five percent (35%) of the floor area of said residence, including accessory structures, up to a maximum of seven hundred fifty (750) square feet, whichever is less, shall be used for such purpose.

The application proposes use of 120 sq. ft of a 575 sq. ft. dwelling unit– for a dedication of 20.86% of the gross floor area for the proposed home occupation; less than the 35% limitation. **Affirmative finding.**

3. No home occupation shall require alterations, construction or equipment that would change the fire rating of the structure or the fire district in which the structure is located.

No site changes are included in this proposal. The application proposes the use of existing kitchen appliances. **Affirmative finding.**

4. There shall be no outside storage of any kind related to the home occupation.

No outside storage is proposed. **Affirmative finding.**

*5. There shall be no exterior evidence of the conduct of a home occupation except for:
Occasional garage/lawn/yard type sales (up to twice a year not to exceed two (2) days each);
and*

One non-illuminated attached parallel sign that shall not exceed two (2) square feet. No other signs shall be permitted.

No garage/lawn/yard type sales are included in this proposal. No outdoor signs are proposed. **Affirmative finding.**

6. No home occupation may increase vehicular traffic flow or parking by more than one additional vehicle at a time for customers or deliveries. All parking shall be located off-street and shall maintain the required front yard setback per Article 5.

As only the resident owner is proposed to be engaged in the home occupation, no additional traffic is proposed. No deliveries or commercial vehicles will be used in the exercise of the home occupation. As no customers or deliveries are proposed, there is no requirement to provide an extra parking space. The existing driveway/garage provides sufficient parking for the existing single family home (2 parking spaces) and accessory apartment (1 parking space); tandem parking could provide a relief space. **Affirmative finding.**

7. No home occupation shall create sounds, noise, dust, vibration, smell, smoke, heat, humidity, glare, radiation, electrical interference, fire hazard or any other hazard, nuisance or unsightliness which is discernible from any adjacent dwelling unit.

The home occupation is proposed for the kitchen of an existing residential unit. No nuisance, hazard or unsightliness is anticipated with the exercise of the home occupation. **Affirmative finding.**

8. The home occupation shall be clearly incidental and secondary to the use of the dwelling for residential purposes and shall not change the character thereof or adversely affect the uses permitted in the residential district of which it is a part.

The home occupation as proposed to be conducted in an existing kitchen. The activity proposed appears clearly secondary and incidental to the primary residential use of the property. **Affirmative finding.**

9. Delivery of products and materials related to the home occupation by vehicles other than automobiles shall occur no more than once per day.

No deliveries are proposed, as indicated on the Home Occupation Questionnaire completed by the applicant. **Affirmative finding.**

10. With the exception of one delivery per day, as specified in subparagraph (9), no more than one commercial vehicle shall be allowed on the premises at any one time; and

As noted above, no deliveries are projected, and no commercial vehicles will be associated with the proposed home occupation. **Affirmative finding.**

11. There shall be no sale of goods except for goods fabricated on the premises as part of an approved home occupation.

No sale of goods on the premises is proposed. **Affirmative finding.**

II. Conditions of Approval:

1. This home occupation is subject to all of the requirements of Sec. 5.4.6., *Home Occupations*, of the Comprehensive Development Ordinance.
2. The applicant is advised to consult with the Office of the Assessor with regards to the Business Personal Property requirements.
3. No additional equipment or materials that results in a change to the fire rating shall be allowed. The building inspector has authority for code jurisdiction, and his approval will be inherent in the issuance (or denial) of associated building permits.
4. There shall be no sale of raw materials or other goods from the property as part of the approved home occupation.
5. There shall be no outside storage of any kind related to the home occupation.
6. There shall be no exterior evidence of the conduct of the home occupation, except for as noted in 5.4.6 (b), 5, above.
7. The home occupation may not increase vehicular traffic flow or parking by more than one additional vehicle at a time for customers or deliveries per Section 5.4.6 (b) 6. All parking shall be located off-street and shall maintain the required front yard setback per Article 5.
8. The home occupation shall not create sounds, noise, dust, vibration, smell, smoke, heat, humidity, glare, radiation, electrical interference, fire hazard or any other hazard, nuisance or unsightliness which is discernible from any adjacent dwelling unit.
9. Standard Permit Conditions 1-15.

NOTE: These are staff comments only. The Development Review Board, who may approve, table, modify, or deny projects, makes decisions.



Department of Planning and Zoning

149 Church Street, City Hall
Burlington, VT 05401-8415
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Fax: (802) 865-7195

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DEPARTMENT OF
PLANNING & ZONING

Home Occupation Application Questionnaire

Use this checklist for all applications for a home occupation - See Sec. 5.4.6 of the Zoning Ordinance. This questionnaire is provided to summarize details and is required to accompany a zoning permit application form and required fee (for either administrative approval or conditional use review).

Please note:

1. The specific requirements for home occupations can be found in Section 5.4.6 of the Comprehensive Development Ordinance which is available in its entirety on our website at www.ci.burlington.vt.us/planning
2. A 'Business Personal Property Registration Form' may be required to be submitted to the Assessors Office. This form is available at www.ci.burlington.vt.us/assessor/businesses

Name of Business Proposed: TBD

Type of Business Proposed: Home Bakery

Provide a detailed description of the proposed Home Occupation such as: activities involved; materials and equipment used; quantities of materials and equipment stored on-site; methods of operation; hours of operation. This may be done on a separate piece of paper and attached.

Please respond to the following:

1. How many persons will be involved or employed in the conduct of the proposed Home Occupation:
Residents of premises: 1 Others Total Number 1
2. What type of product will be produced, serviced, or repaired in the conduct of your Home Occupation? (For example: repair of clocks or watches, making jewelry, etc.). Explain:
Baked goods
3. Describe any alterations to the home or premises that might be required to facilitate your Home Occupation:
N/A
4. Describe what rooms will be used in the conduct of the Home Occupation and how these rooms will be used. (For example: garage will be used to store supplies; or den will contain desk and file cabinets, etc.). Indicate the gross floor area(s) that will be used in the conduct of the Home Occupation. Indicate the total gross floor areas of your house and include any accessory structure(s) to be used for the Home Occupation, (Ex. Garage).
Kitchen - baking 120 sq ft @ 575 sq ft 20.9%
5. Describe the mechanical and/or electrical equipment that will be necessary to conduct your business activity:
Household Appliances - Fridge & Oven
6. Describe how, where and in what amounts the material, supplies and/or equipment related to your Home Occupation will be displayed or stored:
Stored - ingredients & appliances in cabinets

PLEASE TURN OVER

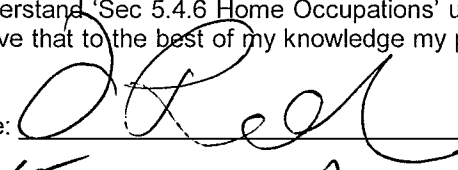
7. Will people come to your home to obtain any product or utilize any service connected with the proposed Home Occupation activity? Yes _____ No X
If yes, please explain in detail:

8. Are any signs necessary or proposed relative to the Home Occupation?
Yes _____ No X
If yes, you are required to file for a Sign Permit. An application form can be obtained at the Planning and Zoning Department or on our website.
9. If trucks or other equipment will be used in your Home Occupation, where will they be parked or stored?
N/A

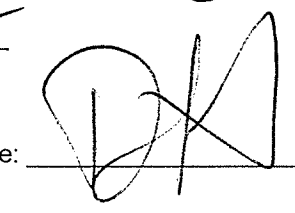
10. Will the Home Occupation involve the use of commercial vehicles for delivery of materials to or from the premises? Yes _____ No X
If yes, please explain:

11. How many parking spaces will be provided for the home occupation? N/A
Where will they be located? Indicate parking spaces on a site plan of this property as part of your application submission.
12. Is your proposed Home Occupation in conformance with the conditions, covenants and restrictions pertaining to your property? Yes X No _____
We suggest checking your deed for conditions, covenants and restrictions.

I have read and understand 'Sec 5.4.6 Home Occupations' under the City of Burlington Comprehensive Development Ordinance and believe that to the best of my knowledge my proposed Home Occupation would not violate any portion of said Ordinance:

Applicant's Signature: 

Date: 3-9-15

*Property Owner's Signature: 

Date: 3/9/15

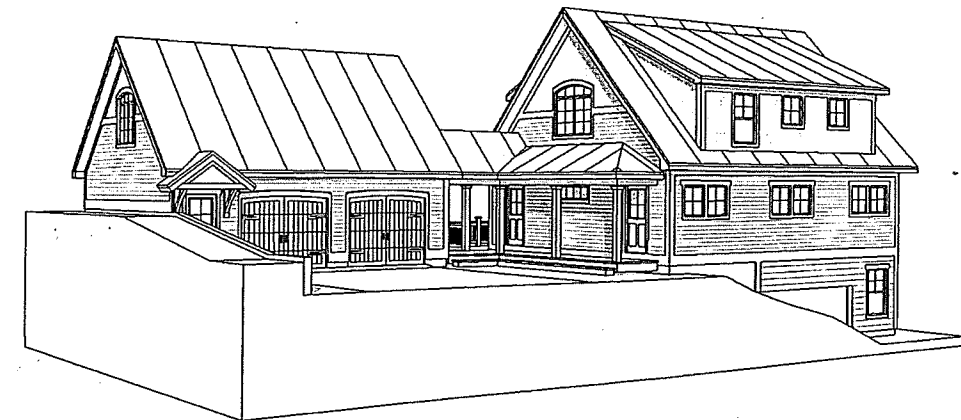
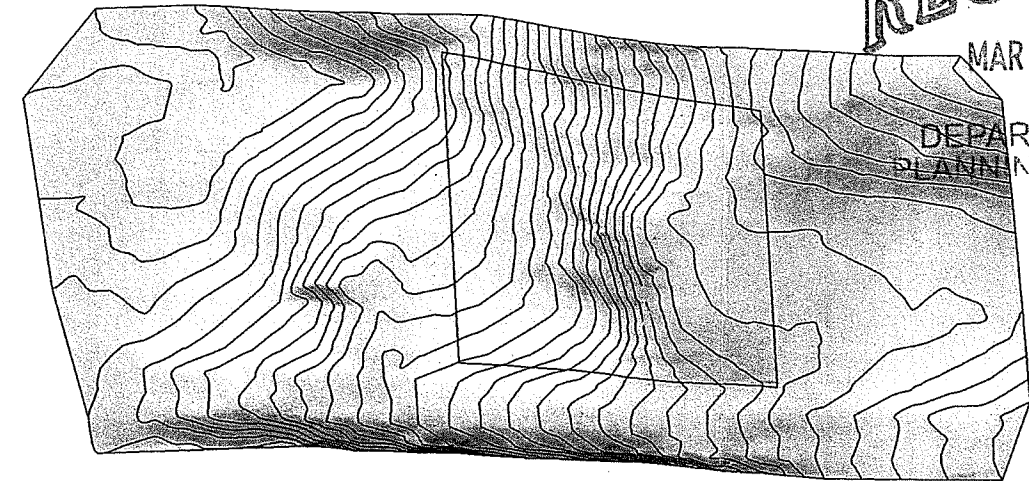
Rec'd via email 5/12/14

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MAR 13 2015

DEPARTMENT OF
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RBW DESIGN
DESIGN
WWW.RBW-DESIGN.COM



115 GLEN ROAD SITE PLAN

-- NOTE --

ANY MODIFICATIONS OR DEVIATIONS FROM THESE PLANS
REQUIRE ZONING APPROVAL PRIOR TO CONSTRUCTION.
ALL ERRORS IN DIMENSIONS, PLANS OR DETAILING ARE
FULLY THE RESPONSIBILITY OF THE APPLICANT/OWNER.

FINAL APPROVAL

SIGNED

DATE 5/12/14

PLANNING & ZONING DEPARTMENT
BURLINGTON, VERMONT

SINGH RESIDENCE
SITE PLAN

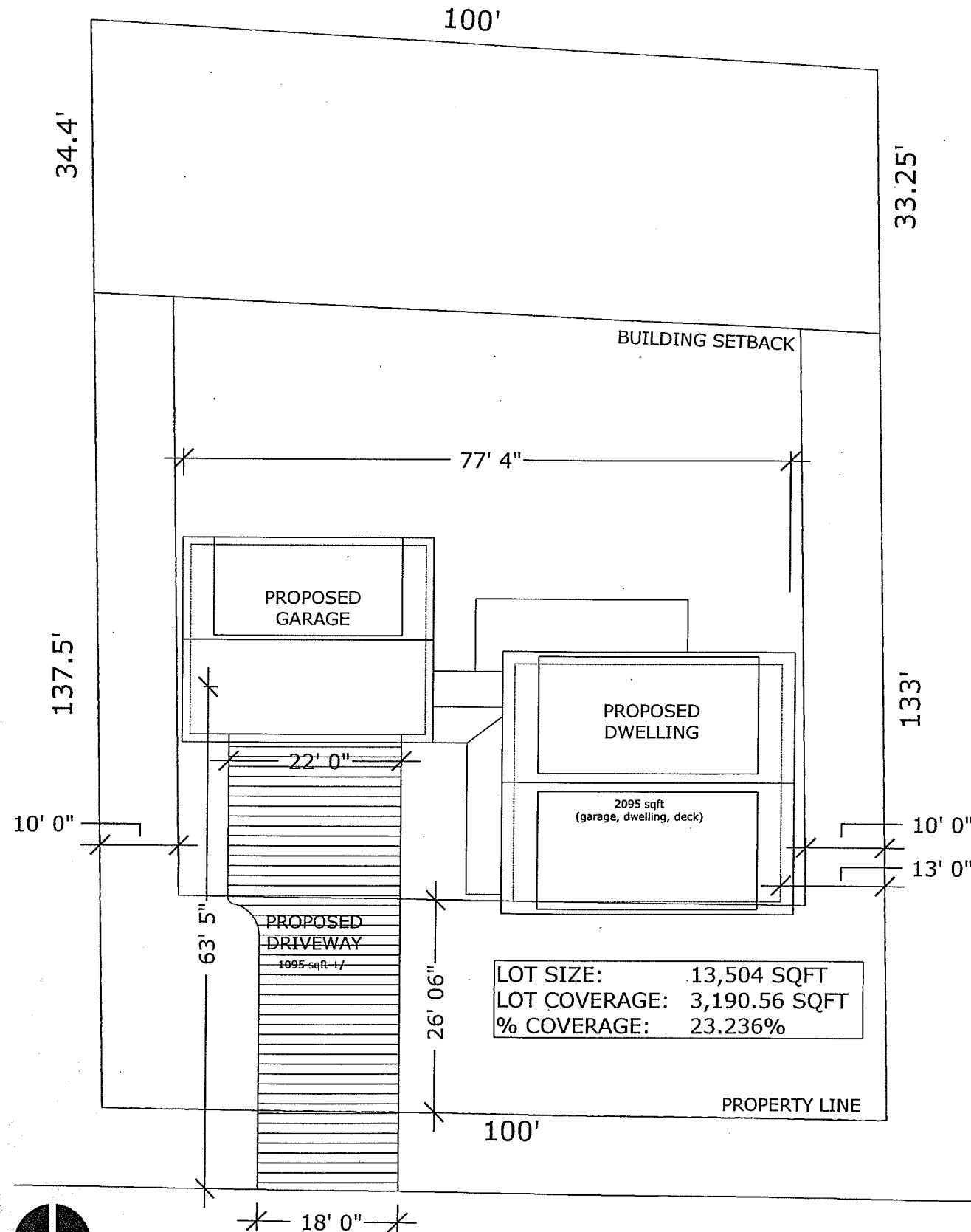
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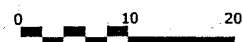
SHEET:

1 OF 1

FILE:



NORTH



GLEN ROAD

2014-0997 BA

Department of Planning and Zoning

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
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Ken Lerner, Assistant Director
Sandrine Thibault, AICP, Comprehensive Planner
Jay Appleton, GIS Manager
Scott Gustin, AICP, Senior Planner
Mary O'Neil, AICP, Senior Planner
Anita Wade, Zoning Clerk
Elsie Tillotson, Department Secretary



TO: Development Review Board
FROM: Scott Gustin *AD*
DATE: April 21, 2015
RE: 15-0801PD; 140 Grove Street

Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. **THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.**

Zone: RL Ward: 1

Owner/Applicant: Ireland Grove Street Properties

Request: Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 232 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements.

Applicable Regulations:

Article 3 (Applications and Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking), Article 9 (Inclusionary and Replacement Housing), Article 10 (Subdivision), and Article 11 (Planned Unit Development)

Recommendation: **Final plat approval** as per, and subject to, the following findings and conditions:

I. Findings

Background Information:

The applicant is seeking final plat approval for a 232-unit residential development, including 19 multi-family buildings, clubhouse, maintenance garage, and associated site improvements. The existing industrial buildings will be demolished and removed. Note that the project name, "Garden Street Apartments," will likely change to "Bayberry Apartments" at the request of the City of South Burlington. This change is requested to avoid name duplication with a residential complex in that city.

The Development Review Board granted preliminary plat approval March 20, 2014. Since that approval was granted, the number of dwelling units has decreased from 245 to the currently proposed 232 units. The proposed building mix has changed to include more smaller buildings and fewer larger buildings. A maintenance garage has also been added to the proposal.

The preliminary plat approval contained the following conditions:

1. This preliminary plat approval in no way grants or implies final plat approval. Final plat application shall be filed in accordance with Section 10.1.9, *Final Plat Approval Process*, of the CDO and per these Conditions of Approval.
2. Prior to final plat application, written acceptance of the proposed public traffic and pedestrian transportation improvements shall be obtained from the Dept. of Public Works. Written approval of the proposed public water and sewer service upgrades shall also be obtained from the Dept. of Public Works.
3. Prior to final plat application, written acceptance of the proposed improvements to Schmanska Park and its parking lot shall be obtained from the Dept. of Parks & Recreation.
4. Prior to final plat application, written acceptance of the proposed street trees along Grove Street shall be obtained from the City Arborist.
5. Prior to final plat application, written acceptance of the single access drive and its sufficiency for emergency service vehicles shall be obtained from the Fire Marshal.
6. Prior to final plat application, a boundary survey by a VT licensed land surveyor shall be provided and shall show all proposed boundary adjustments.
7. Prior to final plat application, the applicant shall contact the Vermont Division for Historic Preservation to inquire as to studies of the area that may indicate heightened archaeological significance.
8. Prior to final plat application, a revised project phasing schedule shall be provided that clearly depicts what will be constructed and when it will be constructed. The phasing schedule shall be consistent with the inclusionary housing requirements of Sections 9.1.18 & 9.1.19 of the CDO. If the inclusionary housing units are to be contained within a single building as presently proposed, the inclusionary housing units must be constructed first. Written acceptance of the proposed inclusionary housing shall be obtained from the city's Housing Trust Fund. The phasing schedule must also provide for the duplex housing units to be built early during the project construction.
9. Prior to final plat application, the site plan shall be substantially revised to strengthen the interior streetscape and to provide for a more gradual transition between smaller buildings to the largest apartment buildings. Doing so may be as recommended in Sec. 6.2.2 (h) of these findings or otherwise.
10. Prior to final plat application, the applicant shall investigate providing a second access into the site to improve connectivity with the surrounding neighborhood. If feasible, the second access shall be depicted on final plat plans.
11. Final plat plans shall depict mechanical equipment, "hot box," and outdoor mailbox details.
12. Final plat plans shall contain consistent building labels between the elevation drawings and site plans. Elevation drawings in the final plat plans shall also include finished grade information on all building sides for all buildings proposed. The final plat plans shall also include accurate perspective drawings. The elevation drawings as presented at preliminary plat are not approvable.
13. Final plat plans shall include a revised clubhouse building design with greater emphasis on perceived verticality.
14. Final plat plans shall include installation details for the proposed exterior building materials.
15. Final plat plans shall depict a concrete public sidewalk across the access drive into the development.
16. Final plat plans shall include information relative to amenities (i.e. water access, tool sheds, etc.) for the community gardens.
17. Final plat plans shall address the feasibility of solar energy or hot water, or at least solar-ready construction, for the development.

18. Final plat plans shall include fixture cut sheets and illumination levels for building entries shall be provided.
19. Final plat plans shall include written approval of the project stormwater management system and erosion prevention and sediment control plan from the Conservation Board and the Stormwater Administrator.
20. The final plat plans shall include a parking management plan per Sec. 8.1.15 of the CDO for the requested parking waiver.
21. The existing 59' tall concrete structure immediately along Grove Street shall be retained and integrated into the project design. Details shall be provided in the final plat plans. Buildings on the lower (eastern) plateau of the property may utilize this structure for a height limit. Buildings on the upper (western) plateau shall not exceed the standard 35' height limit.
22. Prior to final plat approval, Conservation Board shall review the project under Sections 4.5.4 (c) and (d) – riparian and wetland overlay zones.

The final plat plans address these conditions as noted under the pertinent criteria of these findings.

The Conservation Board reviewed this final plat application March 2, 2015. The Board unanimously recommended approval of the project as proposed. The Board noted that it supported the one-entrance plan reflected in the current proposal. The Board also noted that standard erosion prevention and sediment control conditions would apply.

The Design Advisory Board reviewed this final plat application March 10, 2015. The DAB unanimously recommended project approval subject to the following conditions:

1. Dumpster in front of unit H should be moved farther away from the adjacent duplex.
2. Intersperse the inclusionary units throughout the project.
3. Roof (with supports similar to pavilions) should be provided over the Garden Street exterior gang mailbox.
4. Pedestrian path should be added from 1st parking lot at NW corner to Grove Street.
5. As part of final plat approval:
 - a. Revised boundary survey to depict the merger of the two primary parcels on which the proposed development will be built;
 - b. Corrected labeling for the maintenance garage (i.e. should be building Q);
 - c. Depiction and screening of utility meters; and,
 - d. Installation of concrete crosswalks within the development if feasible.

With the exception of conditions 2 and 5(d), the applicant accepts the DAB's recommendations. The applicant asserts that condition 2 is outside of their design review purview and, in fact, it is outside of their purview. The DAB's jurisdiction is noted under Sec. 2.5.1 (b) *Powers and Duties*, of the CDO. It is limited to Article 6 and historic buildings (Sec. 5.4.8). As for condition 5 (d), the applicant wishes to avoid installing concrete crosswalks throughout the development due primarily to maintenance concerns. Over time, the joints between concrete and asphalt become uneven and create problems for snowplows. Striped asphalt crosswalks are common throughout the city. Note that the sidewalks will all be concrete.

Previous zoning actions for this property are noted below.

- 3/20/14, Preliminary plat approval of 245-unit PUD
- 11/10/97, Approval of lot line adjustment with neighboring parcel

Article 3: Applications and Reviews

Part 5, Conditional Use & Major Impact Review:

Sec. 3.5.6, Review Criteria

(a) Conditional Use Review Standards

1. *The capacity of existing or planned community facilities;*

The proposed development will be served by municipal water and sewer. The applicant will install a new municipal water line from Colchester Avenue across Schmanska Park to serve the proposed development. Wastewater within the development will be collected onsite and sent into the municipal system via onsite pump station. The Department of Public Works has issued a wastewater capacity letter to the applicant that verifies sufficient reserve capacity. Public Works has also noted a number of technical details to be addressed as related to the proposed water and wastewater work. All of these details are noted in a February 24, 2015 email from Steve Roy (DPW) to Bryan Currier (applicant engineer). The requirements noted in this email will be incorporated as conditions of permit approval. Note that a state wastewater permit will be needed prior to construction.

The Office of the City Fire Marshal has reviewed and commented on the final plat plans. Correspondence dated November 14, 2014 notes items that have successfully been addressed in the final plat plans. This correspondence (from Barry Simays to Scott Gustin) specifically notes the acceptability of the proposed access drive. Subsequent correspondence dated March 26, 2015 (from Barry Simays to Scott Gustin) notes three items to be addressed: adjustment of a fire hydrant location, speed bump design, and BFD radio systems modifications. These items will be incorporated into conditions of approval. **(Affirmative finding as conditioned)**

2. *The character of the area affected;*

The subject property is large at 20+ acres. The character of the area is defined in significant part by the concrete plant that currently occupies the site. The Centennial Woods natural area lies to the west across Grove Street, and Gorge Island lies to the east within the Winooski River. A small residential development consisting of 12 single family residences and a tri-plex lies to the south (built by the same owner of this project), and to the north are residential properties along Grove Street containing a mix of single family, duplex, and multi-family homes.

This criterion calls for consideration of the character of the area as defined by the purpose of the zone within which the project is located. This project is located in the Residential Low Density zone. The purpose statement as articulated in the CDO is as follows.

Sec. 4.4.5 Residential Districts

(a) Purpose:

The Residential Districts are intended to control development in residential districts in order to create a safe, livable, and pedestrian friendly environment. They are also intended to create an inviting streetscape for residents and visitors. Development that places emphasis on architectural details and form is encouraged, where primary buildings and entrances are oriented to the sidewalk, and historic development patterns are reinforced. Parking shall be placed either behind, within, or to the side of structures, as is consistent with the district and/or the neighborhood. Building facades designed for parking shall be secondary to the residential aspect of a structure.

The 5 Residential districts as illustrated in Map 4.4.5-1 are further described as follows:

1. The **Residential Low Density (RL)** district is intended primarily for low-density residential development in the form of single detached dwellings and duplexes. This district is typically characterized by a compact and cohesive residential development pattern reflective of the respective neighborhoods' development history.

This project has evolved over time and has improved significantly. The original sketch plan depicted 6 very large hotel-like structures with little cohesiveness within the development and no relationship to nearby homes. The final plat plans include a mix of building types and a variety of different scales. The duplexes along Grove Street relate well to the scale and character of existing homes along Grove Street. The size of buildings increases gradually further into the development site. All of the residences face the street and all are interconnected with a network of sidewalks, streets, and green spaces. **(Affirmative finding)**

3. Traffic on roads and highways in the vicinity;

A comprehensive traffic analysis was provided as part of the preliminary plat application. That analysis indicated significant traffic generation – 125 AM peak hour trip ends and 154 PM peak hour trip ends. This traffic will be in place of the existing 61 AM peak hour trip ends and 61 PM peak hour trip ends at the concrete plant. The final plat application includes a traffic memo update to the traffic analysis and reflects the reduction in the number of proposed dwelling units. Total anticipated trip generation lessens to 117 AM peak hour and 145 PM peak hour.

The analysis of the eight intersections remains essentially unchanged. The final plat traffic memo states only that any impacts from the project would be slightly less than previously anticipated. Five of the intersections addressed in the traffic analysis are in Burlington: Riverside Ave/Colchester Ave/Mill St, Riverside Ave/Barrett St, Colchester Ave/Barrett St, Barrett St/Chase St., and Grove St/site access. Only the Barrett St/Chase St and Grove St/site access intersections are not signalized. Despite an increase in vehicle trips, the traffic analysis found that none of the intersections would experience a drop in level of service (LOS) as a result of the project, either in the AM, PM, or overall LOS. Two of the intersections, Riverside Ave/ Barrett St and Colchester Ave/Barrett St experience LOS F in the PM peak hour and will continue to. A scoping study of this corridor and related intersections is underway and will form the basis for improvements. As noted below, the applicants must pay for a proportionate share of these improvements.

The traffic analysis also examined the access point into the development from Grove Street. It found that stopping and corner sight distances are acceptable and that no exclusive left-turn lane into the project from Grove Street is warranted. The final plat traffic memo notes that the proposed access drive has been narrowed from ~57' to ~43' at the sidewalk crossing and has been accepted by the Department of Public Works and the Fire Marshal.

A number of pedestrian improvements were also noted in the traffic analysis. They included sidewalk extensions, new and improved crosswalks, and new signage. The final plat traffic memo notes that a second rapid rectangular flashing beacon will now be installed at the mid-block crossing east of the Schmanska Park parking area. This crossing will be further improved with a bump-out on the east side of the road. Further south, the section of Grove Street proximate to Schmanska Park will be narrowed to 24'.

The traffic analysis recommended incorporation of all of the pedestrian improvements. It also made recommendations relative to intersection signalization, signage, and payment towards improvements at the Colchester Ave/Barrett St/Riverside Ave intersection. The Department of Public Works has reviewed the traffic analysis and final plat traffic memo. Public Works accepts the recommendations contained therein as reflected in an April 9, 2015 memo to Planning & Zoning. That memo also requests a number of clarifications to the final plat plans. These clarifications are technical in nature pertaining to items such as the width of crosswalk markings, depth of street asphalt, and the like. These items will be incorporated into conditions of permit approval. This April 9 memo also notes concern with the Grove Street duplex walkways and notes crosswalk striping standards inconsistent with the DAB's recommendation for concrete crosswalks. These items will be addressed under Sec. 6.2.2 (j) of these findings.

The possibility of bus service to/from the development was a significant point of discussion during preliminary plat review. The end result of that discussion was that CCTA may possibly provide service to the development upon completion if there is sufficient demand. CCTA will not commit to providing service beforehand.

Although addressed in greater detail under Sec. 8.1.15 of these findings, it bears noting that the applicant has entered into agreement with Carshare VT to host an onsite Carshare VT vehicle as part of the effort to reduce overall traffic generation and parking demand.

(Affirmative finding as conditioned)

4. Bylaws then in effect;

As conditioned, the final plat application is consistent with applicable city bylaws. **(Affirmative finding)**

5. Utilization of renewable energy resources;

The project will not immediately utilize renewable energy resources. The buildings will be constructed to be solar-ready. **(Affirmative finding)**

6. Cumulative impacts of the proposed use;

While this project is very large, this criterion stipulates that the cumulative impact of housing, where it is allowed, be considered negligible. **(Affirmative finding)**

7. Functional family;

There is no request to exceed the 4-unrelated adult occupancy limit in any of the proposed dwelling units. **(Affirmative finding)**

8. Vehicular access points;

See Sec. 6.2.2 (i).

9. Signs;

The project plans indicate a freestanding sign near the entrance from Grove Street. No details beyond location have been provided. This sign will require a separate zoning permit. Note that directional signage related to internal circulation is also proposed. **(Affirmative finding as conditioned)**

10. Mitigation measures;

The proposed residential development will likely not generate offsite noise or glare substantial enough to require mitigation. **(Affirmative finding)**

11. Time limits for construction;

The applicant has submitted a phasing schedule that includes a total build-out time of just under 4 years. It spans from July 2015 – March 2019. This schedule is significantly shorter than the 7 years contemplated at preliminary plat. The proposed schedule contains 14 distinct phases and includes all buildings, site work, and renovation of the remaining overlook structure. The project narrative and supplemental information outline the phasing schedule's consistency with the inclusionary housing requirements of Sections 9.1.18 and 9.1.19 of the CDO. As required, the proposed phasing schedule includes construction of the duplexes early on. **(Affirmative finding)**

12. Hours of operation and construction;

Hours of operation need not be specified for this residential development.

Proposed hours of construction have been scaled back from those indicated at preliminary plat application. They are Monday – Friday, 7:00 AM – 5:00 PM and Saturday, 8:00 AM – 3:00 PM. No construction activity on Sunday. These days and hours are acceptable and will be incorporated as conditions of approval. **(Affirmative finding as conditioned)**

13. Future enlargement or alterations;

In the event of future enlargement or alteration, permits would be required and reviewed under the regulations then in effect.

14. Performance standards;

Performance standards relating to outdoor lighting and erosion control are addressed under Article 5 of these findings.

15. Conditions and safeguards;

Conditions of approval are included in these findings in order to ensure compliance with the requirements of the CDO.

(b) Major Impact Review Standards

1. Not result in undue water, air, or noise pollution;

A comprehensive stormwater management system is proposed. The system involves a combination of infiltration, collection, and detention. Infiltrative measures are incorporated throughout the project site. Stormwater that does not infiltrate into the ground will be collected and detained in an upgraded stormwater pond at the eastern end of the site. Water from this pond will be released at a controlled rate and ultimately discharge into the Winooski River. The proposed stormwater system is completely disconnected from the city system. The stormwater system has been reviewed by the Conservation Board and has received its final approval from the Stormwater Administrator.

As the proposed use is exclusively residential, no significant air or noise pollution is anticipated. **(Affirmative finding)**

2. Have sufficient water available for its needs;

See Sec. 3.5.6 (a) 1.

3. *Not unreasonably burden the city's present or future water supply or distribution system;*
See Sec. 3.5.6 (a) 1.

4. *Not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;*

An erosion prevention and sediment control plan has been provided. This plan has been reviewed by the Conservation Board and has received its final approval from the Stormwater Administrator.
(Affirmative finding)

5. *Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;*
See Sec. 3.5.6 (a) 3.

6. *Not cause an unreasonable burden on the city's ability to provide educational services;*

The proposed development may attract families with school age children. The preliminary plat application included an estimate of 18 school-age children based on a January 2007 document issued by VHFA. The 18-child estimate was based on an average of 0.185 children for each of the 99 2-bedroom units and 0 children for the 1-bedroom and efficiency units. While this study is not site-specific, it does affirm the fact that a correlation exists between dwelling unit types and the number of school age children. Specifically, detached single family homes tend to attract the highest proportion of families with school age children, and smaller 1 and 2-bedroom apartment units tend to attract proportionally fewer school age children. The proposed apartments will all be efficiency, 1-, and 2-bedroom units. Impact fees will be paid to help offset impacts to the school system. No comments pertaining to this final plat application have been received from the Burlington School System. **(Affirmative finding)**

7. *Not place an unreasonable burden on the city's ability to provide municipal services;*

The proposed development will generate additional impacts on city services. Review and comment by the Departments of Public Works, Fire, Parks & Recreation, Schools, and Burlington Electric has been solicited. Comments have been received from Public Works, Fire, and Parks & Recreation. As noted under the relevant criteria of these findings, comments have included requirements and recommendations for the project. None have asserted undue adverse impacts.
(Affirmative finding)

8. *Not have an undue adverse effect on rare, irreplaceable or significant natural areas, historic or archaeological sites, nor on the scenic or natural beauty of the area or any part of the city;*
See Sec. 6.2.2.

9. *Not have an undue adverse effect on the city's present or future growth patterns nor on the city's fiscal ability to accommodate such growth, nor on the city's investment in public services and facilities;*

The proposed development will replace a large nonconforming industrial use in this residential zone with a new residential use. While the area is not an identified growth center, the area is zoned residential, and replacement of the industrial use with a residential use is consistent with city land use policy. The development is large enough that it will require upgrades to existing city infrastructure. These upgrades will be at the expense of the applicant. **(Affirmative finding)**

10. Be in substantial conformance with the city's municipal development plan;

The final plan plans are in substantial compliance with the Municipal Development Plan.

The development will replace a nonconforming industrial use with residential units in a residential zone (City of Neighborhoods, pg. I-24). It will also leave the Winooski River shoreline and onsite wetlands undisturbed. Improvement to the Centennial Brook corridor and stormwater management are also proposed (City Policies, pg. II-1) by removal of an existing crossing and restoration of the open channel. The development will provide inclusionary housing units (City Policies, pg. IX-1) as required by the Comprehensive Development Ordinance.

The final plat plans include more duplexes clustered along Grove Street. Building sizes step up incrementally further into the development site (and away from Grove Street). The inclusion of these smaller buildings and tighter placement reflects the neighborhood pattern along Grove Street (City of Neighborhoods, pg. I-24). The gradual progression of duplexes to 6-plexes to 20+, 30+, and 40+ unit buildings reflects existing neighborhood proportions of mass and scale while transitioning to larger scale buildings deeper into the development (City Policies, pg. III-1).

(Affirmative finding)

11. Not have an undue adverse impact on the present or projected housing needs of the city in terms of amount, type, affordability and location;

The proposed development will not adversely impact the housing needs of the city. It will provide 232 efficiency, single, and two-bedroom dwelling units. The final plat plans incorporate an improved diversity of housing types. The project will not have an undue adverse impact on the city's housing needs. Inclusionary housing units will be provided as required. **(Affirmative finding)**

12. Not have an undue adverse impact on the present or projected park and recreation needs of the city.

As the development includes significant private open space, relatively modest impacts on the city's park and recreation needs are anticipated. Payment of impact fees will help offset such impacts. In addition, the applicant has worked with the Department of Parks & Recreation to agree on a series of improvements related to the Schmanska Park parking lot and access thereto. The improvements agreed to are articulated in a November 24, 2014 email from Jesse Bridges to Patrick O'Brien. These improvements will be incorporated into conditions of approval. **(Affirmative finding as conditioned)**

Article 4: Maps & Districts

Sec. 4.4.5, Residential Districts:

(a) Purpose

(1) Residential Low Density (RL)

The subject property is located in the RL zone. This zone is primarily intended for low density residential development in the form of single family homes and duplexes. The PUD process enables greater diversity of housing types subject to applicable criteria as noted under Article 11 of these findings. The final plat plans include nine duplexes along Grove Street and provide a transition to progressively larger buildings further into the development. **(Affirmative finding)**

(b) Dimensional Standards & Density

The development contains 232 residential units. The total combined property size is 24.77 acres. Note that the applicant has calculated density and buildable area based on a lot size of 20.87 acres. The difference is related to "lot C." Present ownership of this parcel by Green Mountain Power versus SD Ireland is unclear. As part of this project, GMP is quit claiming the parcel to SD Ireland (the applicant). The 24.77 acre size is wholly inclusive and reflects adjustments related to boundary line adjustments included in this proposal. The base density of 7 units/acre on this 24.77 acre property is 173 housing units. Given the size of the development (i.e. more than 5 units), inclusionary zoning applies. Inclusionary zoning provides for an additional 25%, or 8.75 units per in this case (216 dwelling units). The buildable area of the site is just 14.84 acres and limits density (with inclusionary housing) to 129 dwelling units. Density bonuses are included in this proposal as noted in Sec. 4.4.5 (d) 7 below.

Lot coverage is limited to 35% (with an additional 10% available for decks, patios, and open porches) of the buildable area. As proposed, lot coverage within the buildable area is 42.8%. Applicable development bonuses allow up to 50% coverage.

Front yard setbacks are based on the average of neighboring properties along the same street. In this case, the front yard setback is 14' +/- 5'. The closest duplex along Grove Street complies with this setback at 9.5' from the front property line. Side yard setbacks are 10% of the lot width, up to 20', which is depicted on the site plans. The rear property line is defined by the Winooski River. As a result, a waterfront setback applies. This setback is 75' from the ordinary high water mark. The nearest building to the river is about 190' away.

Building height was a significant concern during the preliminary plat review process. Specifically, the height of the largest apartment buildings exacerbated their massive scale and lack of relationship to their surroundings. There is provision under Sec. 5.2.6, *Building Height Limits* for exception to the standard 35' height limit; however, this provision does not negate design review considerations. The Development Review Board required that all of the buildings on the upper plateau (nearer Grove Street) remain below 35'. The buildings on the lower plateau were allowed to be taller. The final plat plans reflect the DRB's direction. The upper plateau contains a variety of building types, and all remain below 35'. The lower plateau contains three large apartment buildings, the clubhouse/office, and maintenance building. Apartment buildings T and S are slightly below 40' tall, and building R (the tallest) is 49.9' tall. Both the clubhouse/office building and the maintenance building are well under 35' tall. The final plat plans include elevation data and the average finished grade for each building. **(Affirmative finding)**

(c) Permitted & Conditional Uses

The major PUD is subject to conditional use review in the RL zone.

(d) District Specific Regulations

1. Setbacks

No setback encroachments are sought.

2. Height

Not applicable in RL.

3. Lot Coverage

No lot coverage exceptions are sought.

4. Accessory Residential Structures and Uses

The proposed office/clubhouse and maintenance buildings are accessory to the residential development. As such they are subject to the dimensional and design review requirements of the CDO. **(Affirmative finding)**

5. Residential Density

All of the proposed residential units are subject an occupancy limit of 4 unrelated adults or a family as defined in the CDO. **(Affirmative finding)**

6. Uses

Not applicable.

7. Residential Development Bonuses

The applicant is seeking a residential conversion bonus under item D of this criterion. This bonus allows for a maximum of 8 dwelling units/acre for the conversion of a nonresidential use (in this case, a concrete plant) to a residential use subject to two criteria: 1) The structure shall not have previously been converted from a residential use to a nonresidential use. The concrete plant has never been residential. 2) The structure proposed for demolition shall not be listed or eligible for listing on the National or Vermont Register of Historic Places. The concrete plant is not historically significant. Note that this first criterion has been deleted by way of amendment from the current CDO; however, this application is vested under the two-criterion language as noted.

The project, due to the number of proposed dwelling units (i.e. more than 5), is also subject to inclusionary zoning requirements. As a result, a base density of 8.75 dwelling units per acre applies. Inclusionary housing, while a requirement under Article 9, is also a bonus under this section of the ordinance.

These two bonus requests were considered under the preliminary plat review and remain unchanged. Together, the two bonuses result in a density limit of 16.75 units per acre and are under the limits noted in Table 4.4.5-8, *Maximum Density, Lot Coverage and Building Heights with Bonuses*. Based on the buildable area of 14.84 acres, 248 dwelling units is the maximum potential density. The 232 units proposed in this final plat application are under this maximum. **(Affirmative finding)**

Sec. 4.5.4, Natural Resource Protection Overlay (NR) District

(c) District Specific Regulations: Riparian and Littoral Conservation Zone

The subject property is affected by the Riparian and Littoral Conservation Zone for a 250' swath along the length of the Winooski River. This overlay zone also parallels Centennial Brook 100' wide on both sides. The project includes removal of a culvert that creates a choke point on Centennial Brook and will likely benefit the waterway and the wildlife using it. The final plat plans depict these overlay zones as required. No new stormwater outfalls are proposed within these overlay zones. The degree of encroachment into these overlay zones will either remain unchanged or be lessened from existing conditions. The Conservation Board has reviewed the final plat application and recommended approval. **(Affirmative finding)**

(d) District Specific Regulations: Wetland Conservation Zone

The subject property contains extensive wetlands, particularly to the northeast. This overlay includes the wetlands and their associated 100' wide buffer zone. The final plat plans depict the wetlands and their buffer zones. None of the wetlands are directly impacted; however, development will take place within some of the buffer zones. As with the riparian and littoral conservation zone, the degree of encroachment into the wetland buffers will either remain unchanged or will be reduced from existing conditions. As required, an assessment of impacts relative to wetland functions and values has been provided. As noted above, the Conservation Board reviewed the final plat plans and recommended approval. **(Affirmative finding)**

(f) District Specific Regulations: Special Flood Hazard Area

The subject property contains flood plain areas along the Winooski River affected by the special flood hazard area (SFHA). None of the proposed construction will take place within the SFHA. **(Affirmative finding)**

Article 5: Citywide General Regulations

Sec. 5.2.3, Lot Coverage Requirements

See Sec. 4.4.5 (b) above.

Sec. 5.2.4, Buildable Area Calculation

As the subject property is located within the RL zone and is greater than 2 acres in size, this criterion applies. The final plat plans depict areas of wetlands and steep slopes (15% - 30% and 30% +). The resultant buildable area is 14.84 acres. Density and lot coverage calculations are based upon this figure as required. **(Affirmative finding)**

Sec. 5.2.5, Setbacks

See Sec. 4.4.5 (b) above.

Sec. 5.2.6, Building Height Limits

(b) Exceptions to Height Limits, 1

This criterion allows (permissive, not prescriptive) for new construction to exceed the 35' height limit within parcels containing an existing structure exceeding 35' as of January 1, 2008. A portion of the concrete plant contains a structure of 59' tall that has been in place since before January 1, 2008. The subject structure is immediately adjacent to Grove Street. The applicants had originally sought to demolish this structure; however, the Development Review Board required that it be retained, as it is to be used as a basis for exceeding 35' height.

The final plat plans contain renovation details for this industrial structure. The applicant proposes to transform it into a formalized overlook structure. A small covered pavilion will be installed along with a new memorial marker, landscaping, and walkway to connect it to the public sidewalk and street. The applicant will retain ownership of the structure and will be responsible for its ongoing maintenance. **(Affirmative finding)**

Sec. 5.2.7, Density and Intensity of Development Calculations

See Sec. 4.5.5 above.

Sec. 5.5.1, Nuisance Regulations

Nothing in the proposal appears to constitute a nuisance under this criterion. **(Affirmative finding)**

Sec. 5.5.2, Outdoor Lighting

New outdoor lighting will consist of pole-mounted fixtures for parking and circulation areas, and wall-mounted fixtures for building entries. Fixture locations are depicted on project plans, and the proposed lights are acceptable cut-off fixtures. Acceptable illumination levels are indicated in all lighting environments (building entries, parking & circulation, and walkways). The pole-mounted parking & circulation fixtures are all mounted at an acceptable 16.5.' **(Affirmative finding)**

Sec. 5.5.3, Stormwater and Erosion Control

As noted previously, the Conservation Board has reviewed the proposed stormwater management system and erosion control plans. The Board recommended approval of the project. The Stormwater Administrator has issued final approval of the proposed stormwater management plan and erosion control plans. **(Affirmative finding)**

Article 6: Development Review Standards:

Part 1, Land Division Design Standards

Sec. 6.1.2, Review Standards

No new subdivision of land is proposed; however, several lot line adjustments with neighboring properties are included. The required boundary surveys have been submitted and clearly depict the proposed adjustments. The two primary parcels that form the basis of this development; however, continue to read as separate parcels. The applicant's intent is to merge these parcels together. The boundary survey must be revised to include this merger. **(Affirmative finding as conditioned)**

Part 2, Site Plan Design Standards

Sec. 6.2.2, Review Standards

(a) Protection of important natural features

The property is bordered by the Winooski River to the north, and Centennial Brook runs through a portion as well. The Riparian & Littoral Conservation Zone that buffers these waterways affects the property. Extensive wetlands are also present on the property, particularly on its eastern end. The associated Wetland Conservation Zone protects these wetlands. The Conservation Board reviewed this project under Sec. 4.5.4, *Natural Resource Protection Overlay District* at their March 2, 2015 meeting and recommended approval. For the purposes of this design review criterion, the proposed development does not infringe on any of the wetlands or waterways running by or through the property. The contiguous stands of forest bordering the development site to the north and east will remain intact. All proposed construction will take place within existing developed area. **(Affirmative finding)**

(b) Topographical alterations

The area to be redeveloped sits on two plateaus; upper by Grove Street and lower set back to the east. A number of retaining walls are proposed, particularly where there are relatively large changes in grade over short distances (i.e. such as into the underground garage entries). These retaining walls will consist of poured "form lined" concrete or a decorative concrete block. The poured concrete walls will have a faux stone finish. It appears the precast block walls will too. While grading and filling is needed for construction throughout the site, the general topography will remain as it presently exists. **(Affirmative finding)**

(c) Protection of important public views

There are no important public views from or through the property. **(Affirmative finding)**

(d) Protection of important cultural resources

The property is not included in the city's map of archeologically sensitive areas (in the Open Space Protection Plan); however, its location along the Winooski River increases the likelihood that prehistoric artifacts may be present. As required by the preliminary plat approval, the applicant consulted with the Vermont Division for Historic Preservation and conducted a site visit on July 11, 2014. No archaeologically sensitive areas were identified within the project footprint.

(Affirmative finding)

(e) Supporting the use of alternative energy

No alternative energy is incorporated into the project design. Solar energy utilization remains a possibility, and as required by the preliminary plat approval, the buildings will be constructed to be solar-ready for rooftop panels. **(Affirmative finding)**

(f) Brownfield sites

The property is included on the Vermont DEC Hazardous Site List. The listing indicates that diesel and heating oil contamination were found but also notes that Site Management Activities were completed in 1999. **(Affirmative finding)**

(g) Provide for nature's events

A stormwater management system is proposed. The system has evolved to include a variety of rain gardens, grassed swales, catch basins and an onsite "wet" pond for attenuation. While runoff from large storms will eventually reach the pond prior to discharge into the Winooski River, provision has been made to allow for infiltration of smaller storm events onsite. Existing discharge points into Centennial Brook will be eliminated. The Conservation Board reviewed and recommended approval of the stormwater management plan at their March 2, 2015 meeting. The proposed stormwater system has been approved by the Stormwater Administrator.

A comprehensive erosion prevention and sediment control plan has been provided. The Conservation Board reviewed and recommended approval of the erosion prevention and sediment control plan at their March 2, 2015 meeting. As with stormwater management, final approval by the Stormwater Administrator has been obtained.

Several areas for snow storage are interspersed throughout the site. All of the residential buildings and the clubhouse feature sheltered entrances. **(Affirmative finding)**

(h) Building location and orientation

The proposed development is large enough that it will essentially result in the establishment of a new neighborhood. The visible public streetscape along Grove Street is an important component; however, equally important is the establishment of a well-defined built environment, functional open spaces, and interconnectivity between these components within this new neighborhood.

The most substantial project changes since preliminary plat approval relate to the proposed buildings and their layout along the interior streets. The preliminary plat approval required that the site plan be substantially revised to strengthen the interior streetscape and provide for a more gradual transition from the relatively small duplexes to the largest apartment buildings. The proposed revisions address this condition.

Duplexes flank the entry into the project and continue north along Grove Street. Another row of duplexes and a 6-plex face the center green. Duplexes and 6-plexes line the entry drive to the first intersection. These smaller buildings reflect the scale of neighboring residences and begin the transition to the larger buildings further into the interior of the development. On the upper plateau, street corners have been hardened, and buildings have been set parallel to the interior roads. All of the buildings are oriented towards the street (either Grove or interior streets) and, further into the development, arranged around a center green. The three largest apartment buildings and the clubhouse are set on the lower plateau, farthest away from Grove Street homes. These larger buildings are orientated towards the interior streets and set parallel thereto. In all cases, the buildings are set close to the interior streets with clearly identifiable entries connected to the walkway network.

Overall, the project revisions achieve the required transition in scale from smaller buildings along Grove Street to the larger buildings set farthest into the interior of the development. The interior streetscape has been strengthened by way of improved building siting, diversification, and orientation. **(Affirmative finding)**

(i) Vehicular access

One existing curb cut will be removed to allow for restoration of the Centennial Brook channel. Doing so will leave one curb cut to serve the development. As required, the applicant investigated the possibility of a second access onto Grove Street. The applicant found that doing so could improve connectivity but would result in minimal sight lines for the second access due to the curve in Grove Street. It would also preclude restoration and daylighting of this portion of Centennial Brook. The single proposed access is the better alternative. Adequacy of this access has been approved by the Fire Marshal. Sight lines and turning radii have been reviewed by the Department of Public Works. **(Affirmative finding)**

(j) Pedestrian access

All proposed buildings have front walkways that connect to the walkway network throughout the development. This interior walkway network connects to the public sidewalk along Grove Street. This public sidewalk will be extended into South Burlington as part of this development. The new duplexes facing Grove Street each have individual front walkways connecting to the public sidewalk. The Department of Public Works is concerned with the walkway stairs in the Grove Street right-of-way for duplexes C and B. DPW notes several alternatives, including a single pedestrian connection for the 4 duplexes along Grove Street or merging connections down to two walkways. The individual walkways connecting to Grove Street best meet the intent of this criterion. Due to grades, removing the steps from the ROW does not appear to be feasible. Keeping the proposed arrangement is acceptable but will require that the applicant enter into a license agreement with the city, subject to review and approval by the City Council.

The final plat plans clearly note the continuation of the concrete public sidewalk across the access drive into the development. Previously, striping had been noted. Within the interior street network, crosswalks are striped. Concrete crosswalks may be preferable if feasible; however, as noted previously, striping is commonplace and adequate. Maintenance is required to keep the striping fresh and functional.

Pedestrian routes from parking areas are depicted on the project plans. As recommended by the DAB, a pedestrian path should be added from the northwest corner of the duplexes' parking lot to Grove Street. **(Affirmative finding as conditioned)**

(k) Accessibility for the handicapped

Handicap parking spaces are depicted on the site plans. The buildings will require handicap accessible features per the ADA as administered through the city's building code. **(Affirmative finding)**

(l) Parking and circulation

Parking will be provided underneath the 6 largest buildings, along the interior streets, and in several surface parking lots. Parking along the interior streets is mostly parallel, buildings are oriented towards the streets or center green with parking behind, and adequate space is afforded for circulation along the interior streets and within the parking lots.

This criterion also requires shading of surface parking areas. A shading study has been provided that demonstrates 30% or greater shading of the three interior parking lots. Shading is achieved with new shade trees required by this criterion. **(Affirmative finding)**

(m) Landscaping and fences

A comprehensive landscaping plan has been provided and includes an extensive mix of new trees, shrubs, and perennials. Trees will line all of the parking areas and interior streets. A line of new street trees is proposed along Grove Street and has been reviewed and approved by the City Arborist as required. The center green features a small grove of apple trees and community garden space. Other edible plantings within the project include strawberries, black berries, raspberries, and high bush blue berries. Generally, the proposed landscaping is used to provide boundaries between interior spaces and to soften transitions between buildings and pavement. Split rail fencing will be installed to follow the eastern "ridgeline" along the clearing boundaries of the site. It too will provide a boundary between the developed and wooded portions of the property.

The existing 59' tower structure immediately along Grove Street will be retained as required. Details pertaining to the renovation of this former industrial structure have been provided. The structure will be cleaned up and will have a new publicly accessible pavilion on top. The top of the structure affords significant views over the site and the river below. As such it is intended to serve as both an overlook and a memorial to the former industrial site. **(Affirmative finding)**

(n) Public plazas and open space

Substantial open space will be available for use by residents of the development. A large center green is proposed and may be used for active or passive recreation. A clubhouse and community pool are also provided. Two pavilions will provide sheltered space for outdoor activities. Links to trails will be provided and will afford access into the wooded portions of the property. Two "community garden" sites are also depicted on the final plat plans. These gardens will be available only to residents of the development. **(Affirmative finding)**

(o) Outdoor lighting

See Sec. 5.5.2.

(p) Integrate infrastructure into the design

Substantial new infrastructure will be required to support the proposed development. A utility plan and details sheet have been provided. All utility lines must be buried.

Several dumpster pad locations are evident on the site plan. The project plans provide details specifying concrete pads with full enclosures (fiber cement board siding with wire fence gates). As recommended by the DAB, the dumpster in front of duplex H should be relocated further away from the duplex.

The larger apartment buildings will have interior wall-mounted mail boxes. The duplexes will share an exterior “gang” box. The proposed “gang” mail box is a standard metal cabinet. As recommended by the DAB, a roof (with supports similar to the pavilions) should be provided over this “gang” mailbox.

A utility plan has been provided and depicts the location of utility “hot boxes” and HVAC pads as required. Most are placed away from the interior streets, and all appear to be screened with landscaping. **(Affirmative finding as conditioned)**

Part 3, Architectural Design Standards

Sec. 6.3.2, Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The final plat plans include an improved variety of building types. There are more duplexes (there are 9 now). Some previously proposed larger apartment buildings have been replaced by a cluster of 6-unit buildings. A previously proposed 33-unit building has been replaced with two separate buildings (21 and 6 units). A full story has been eliminated from building “I”. The largest apartment buildings, (J, R, T, and S) remain essentially unchanged. As required, building labeling has been cleaned up for consistency between the site plans and elevation drawings. The maintenance garage, however, is mislabeled as a second building “G” (it should be Q). Perspective images have also been improved to depict the buildings as they are shown in the elevation drawings.

The duplexes provide an appropriate starting point for the new development along Grove Street. Their massing, height, and scale is similar to that of existing residences along the street. This is the single most important consideration under this criterion for new residential development.

Further into the development, the duplexes blend into a cluster of 6-unit buildings. The 6-plexes successfully read as large homes. They effectively utilize fenestration, porches, dormers, and other architectural details to provide some level of intricacy to these fairly large buildings. The larger structures, ranging from 21 to 44 units, all read as apartment buildings. These buildings incorporate a variety of porches, balconies, varying materials, and architectural details to avoid any large expanses of undifferentiated building mass. The buildings also appear more vertical than horizontal as required by this criterion. As recommended, an overall materials palate is proposed. Material selection and arrangement on individual buildings may vary to avoid exact replication.

The clubhouse building is dimensionally similar to what was depicted on the preliminary plat plans. As required, however, siding and fenestration has been changed to provide more a more vertical emphasis on the building's appearance.

Lastly, a new maintenance garage has been added to the final plat plans. This building is set into the hillside and will be minimally visible from most of the development. It will be most prominent as viewed from the clubhouse across the street. The building is a fairly small and reads as a basic garage structure clad in materials similar to those used elsewhere in the development. **(Affirmative finding as conditioned)**

2. Roofs and Rooflines

The duplexes include traditional gable roofs. The 6-unit buildings incorporate a hip roof design with roof dormers to enable living space. The proposed roof type is typical of residential development. The larger buildings are essentially gable-roofed structures. Within this gable roof form, differing planes and dormers break up the overall roof mass. The clubhouse building includes a gable roof with dormers, and the maintenance garage has a basic gable roof. **(Affirmative finding)**

3. Building Openings

Proposed fenestration in the duplexes and 6-unit buildings is typical for residential development and appears to consist primarily of double hung windows with grilles applied in a consistent pattern. There is more variation in the larger apartment buildings. That variation helps to define individual components within these larger structures. The clubhouse includes fenestration unique within the development and has been changed to exhibit a more vertical emphasis. The relatively unique fenestration appropriately helps to differentiate it from the residential buildings. Windows within the maintenance garage consist of basic awning units that serve to allow sunlight and fresh air into the building. Their basic appearance is consistent with the overall appearance of the garage. **(Affirmative finding)**

(b) Protection of important architectural resources

Buildings within the existing concrete plant are not historically significant. Their demolition will not adversely impact any important architectural resources. As noted previously, the existing tower structure immediately along Grove Street will be retained and made into a quasi-historical memorial to the long-time industrial use of the site. **(Affirmative finding)**

(c) Protection of important public views

See 6.2.2 (c) above.

(d) Provide an active and inviting street edge

The proposed development is large enough to amount to the creation of a new residential neighborhood. The final plat plans bring all of the structures close to the street at parallel angles. All of the buildings contain well defined, street-facing front entries (many with porches), and all are connected to the sidewalk network. **(Affirmative finding)**

(e) Quality of materials

Exterior building materials consist largely of varying types of vinyl siding (lap and shingle). Some brick veneer will be utilized on the largest apartment buildings and on portions of the clubhouse. Composite trim (5" wide) will be installed along with asphalt shingle roofing. Railings will be

metal, and extruded vinyl windows will be installed. Vinyl siding is not especially durable; however, during preliminary plat review, the Design Advisory Board and the Development Review Board found that vinyl could be acceptable depending on installation details. The final plat plans include detailed elevation drawings and perspective drawings. The applicant demonstrated installation details at DAB review. "J-channel" will not be used. **(Affirmative finding)**

(f) Reduce energy utilization

The proposed buildings must comply with the city's current energy efficiency requirements. As noted previously, the buildings will be constructed to be solar ready. **(Affirmative finding)**

(g) Make advertising features complimentary to the site

See Sec. 3.5.6 (a) 9.

(h) Integrate infrastructure into the building design

Vents are noted on the elevation drawings and are acceptably located on secondary elevations. No utility meters are evident. As recommended by the DAB, they must be depicted and screened. No rooftop mechanical equipment is proposed. **(Affirmative finding as conditioned)**

(i) Make spaces safe and secure

Building entries will be illuminated. Intercom systems are recommended to maximize the personal safety of the tenants. The Fire Marshal has approved the single site access. **(Affirmative finding as conditioned)**

Article 8: Parking

Sec. 8.1.8, Minimum Off-Street Parking Requirements

The subject property is located in the neighborhood parking district. As a result, each dwelling unit requires 2 parking spaces – a total of 464 parking spaces in this case. An additional 2 spaces are needed for the onsite rental office in the clubhouse building. Providing this many parking spaces results in a vast amount of asphalt. At preliminary plat, the Conservation Board, Design Advisory Board, and Development Review Board recommended that the applicant reduce the amount of parking spaces and seek a parking waiver with the understanding that all of the dwellings are efficiencies, 1-, and 2-bedroom units. The final plat plans reflect this reduction. See Sec. 8.1.15 for the requested waiver and associated parking management plan. **(Affirmative finding)**

Sec. 8.1.15, Waivers from Parking Requirements/Parking Management Plans

A comprehensive parking management plan has been submitted in support of the requested parking waiver. As noted above, the standard 2-space per dwelling unit parking requirement results in 464 parking spaces, plus 2 for the onsite administrative office. As proposed, 394 parking spaces will be provided (1.7 spaces per unit). The 394 parking spaces provided exceed the 309 bedrooms to be constructed. As many of the residential parking spaces are expected to be vacant during the day, the 2 office spaces will be shared with the residences.

Parking will be by permit only and will require registration with the apartment complex and display of a parking sticker. Covered parking will be fee-based, and surface parking will be first-come, first-served. Parking will be administered and enforced onsite. Violators will be towed. The parking management plan contains an analysis of factors (geographic location, proximity to

employment, bicycle storage, etc.) that may contribute to reduced vehicle ownership. No specific data is provided to support the downward adjustment in parking demand. Things such as onsite bike storage and proximity to recreation and employment may well reduce traffic generation and perhaps parking demand, but the results of the analysis lack substantiation. The single most important factor pushing parking demand down is the efficiency, 1-, and 2-bedroom unit types. This downward adjustment based on unit types can be substantiated by Institute of Transportation Engineers' data. The presence of an onsite Carshare VT vehicle is also a significant factor and provides a viable transportation opportunity for residents without a personal vehicle. Importantly, the parking management plan includes an executed agreement between the applicant and Carshare VT.

Finally, the parking management plan notes that there is ample room onsite in the event that additional parking becomes necessary. Reoriented and additional parking spaces could be provided around the center green. This adjustment would bring the parking ratio up to 1.8 spaces per unit. Beyond that, there remains space available for a full complement of parking. The management plan as proposed makes either scenario unnecessary. **(Affirmative finding)**

Sec. 8.2.5, Bicycle Parking Requirements

The final plat plans contain bike parking details. The project requires 58 long term spaces and 23 short term spaces. As proposed, at least 86 long term spaces and 72 short term spaces will be provided. Long term spaces will be provided within the parking garages. Short term spaces will be provided in a series of bike racks next to the apartment buildings throughout the site. **(Affirmative finding)**

Article 9: Inclusionary and Replacement Housing

Sec. 9.1.5, Applicability

As the proposed development includes more than 5 new dwelling units, it is subject to the inclusionary housing provisions of this Article. Fifteen percent of the total unit count must be inclusionary (15% of 232 is 35 dwelling units). The application notes that these 35 inclusionary units will be provided. Approval from the manager of the city's Housing Trust Fund has been obtained. This approval stipulates that the mix of inclusionary unit types reflects the mix of unit types generally within the development. This stipulation will be included as a condition of approval. **(Affirmative finding as conditioned)**

Sec. 9.1.18, DRB Review of Proposal for Phasing & Sec. 9.1.19, Timeline for Availability/Phasing of Inclusionary Units for Issuance of Certificate of Occupancy

As noted previously, a phasing schedule for the entire project has been submitted. The applicant has provided supplemental information by way of email correspondence dated April 13, 2015 from Patrick O'Brien to Scott Gustin. This supplemental information articulates how provision of inclusionary units will be integrated into the phasing schedule. As proposed, the inclusionary units will be located in multiple buildings within the development. Phases 1A & 1B, 2A & 2B, and 3A will include the construction of all 35 inclusionary housing units. This proposal satisfies Sec. 9.1.19, which specifically requires that inclusionary units be made available for occupancy on approximately the same schedule as the project's market rate units.

As an alternative, the applicant requests the ability to lengthen the period of time for providing the inclusionary units. As requested, all inclusionary units would be provided, possibly in one building, prior to occupancy of the 200th unit in the development. This alternative would require

that the Development Review Board change its preliminary plat stipulation that all of the inclusionary units be built either first or at a rate consistent with the build-out of the market-rate units. **(Affirmative finding as conditioned)**

Article 10: Subdivision

No subdivision of land is included in this proposal. Several lot line adjustments with abutting properties are included. The required boundary survey done by a VT licensed surveyor is included in the final plat application. **(Affirmative finding)**

Article 11: Planned Unit Development

Sec. 11.1.6, Approval Requirements

(a) Lot coverage requirements of the district shall be met

The coverage limit is 35% in the RL zone, but may reach 50% with bonuses. The plans note 42.8% coverage of the buildable area. **(Affirmative finding)**

(b) The minimum setbacks required for the district shall be met

As noted previously, front, side and waterfront setbacks are compliant. **(Affirmative finding)**

(c) The minimum parcel size shall be met if the project is located in a RL or RL-W district

The two acre minimum lot size requirement for PUD has been met. **(Affirmative finding)**

(d) The project shall be subject to design review and site plan review of Article 3, Part 4

See Article 3 above.

(e) The project shall meet the requirements of Article 10 for subdivision review

See Article 10 above.

(f) All other dimensional, density, and use requirements of the underlying zoning district shall be met as calculated across the entire project

Three apartment buildings exceed the standard 35' limit. Sec. 5.2.6 (b) and the associated retention and renovation of the tower structure along Grove Street enable doing so. **(Affirmative finding)**

(g) Open space or common land shall be assured and maintained in accordance with the conditions as prescribed by the DRB

Significant open space will be provided and will afford opportunity for passive and active recreation. Project plans indicate that the open space lands will be maintained by the project owner. **(Affirmative finding)**

(h) The development plan shall specify reasonable periods within which development of each phase of the planned unit development may be started and shall be completed. Deviation from the required amount of usable open space per dwelling unit may be allowed provided such deviation shall be provided for in other sections of the planned unit development.

A nearly 4-year build-out has been requested. A phasing plan has been provided and separates the project into distinct components and specifies time frames for each. **(Affirmative finding)**

(i) The intent as defined in Sec. 11.1.1 is met in a way not detrimental to the city's interests

Sec. 11.1.1, Intent

- (a) *Promote the most appropriate use of land through flexibility of design and development of land;*

Removal of a nonconforming industrial use and replacement with residential development is conceptually appropriate. The final plat plans are a significant improvement over previous renditions and address the preliminary plat conditions to revamp the development. The revisions result in a more cohesive neighborhood that relates to the existing built environment while providing a sensitive transition to larger scale structures further into the development. **(Affirmative finding)**

- (b) *Facilitate the adequate and economical provision of streets and utilities;*

Multiple residences will be served by shared streets and utilities within the development. Construction of the residences and supporting infrastructure is included in the same development. **(Affirmative finding)**

- (c) *Preserve the natural and scenic qualities of open space;*

Open space will remain, and much of it will contain protected natural features like wetlands and riparian corridors. **(Affirmative finding)**

- (d) *Provide for a variety of housing types;*

The final plat plans incorporate a broader variety of housing types. Residential structures now include 2-, 6, 20+, 30+, and 40+ unit buildings. Unit types will be efficiency, 1-bedroom, and 2-bedroom. **(Affirmative finding)**

- (e) *Provide a method of development for existing parcels which because of physical, topographical, or geological conditions could not otherwise be developed; and,*

Not applicable. The subject property does not need to be developed as a PUD, but it may be.

- (f) *Achieve a high level of design qualities and amenities.*

The Design Advisory Board unanimously recommended approval of the final plat plans. Building details have evolved and improved since preliminary plat. Equally important, building layout has been revised to strengthen the interior streetscape. Substantial recreational, garden, and other open space will be provided. The grounds will be dotted with edible landscaping. An onsite clubhouse and pool will be constructed, and covered parking will be provided. The development will be managed with an onsite administrative staff. Overall, the final plat plans incorporate a high level of design quality and amenities. **(Affirmative finding)**

- (j) *The proposed development shall be consistent with the Municipal Development Plan*

See Sec. 3.5.6 (b) 10.

II. Conditions of Approval

1. Within 180 days of the date of final approval, the property plat mylar, with all applicable endorsement signatures, shall be filed with the City Clerk per Sec. 10.1.11 of the Comprehensive Development Ordinance. Failure to do so shall render void the final plat approval.

2. **Prior to release of the zoning permit**, revised project plans shall be submitted, subject to staff review and approval. The revised plans shall incorporate the following:
 - a. All details noted in “red” in the February 24, 2015 email from DPW engineer Steve Roy to Bryan Currier;
 - b. Resolution of the three items called out in the March 26, 2015 letter from fire marshal Barry Simays to Scott Gustin;
 - c. Adjustments and additional information as outlined in the April 9, 2015 memo from DPW engineer Laura Wheelock to Scott Gustin;
 - d. Conditions of the Design Advisory Board’s March 10, 2015 review of this project (except for condition 2);
 - e. Merger of lots A, B, and C into a single parcel to be reflected in the boundary survey & boundary adjustment plan;
 - f. A pedestrian path from the northwest corner of the duplexes’ parking lot to Grove Street;
 - g. Relocation of the dumpster in front of duplex H further away from that residence;
 - h. Provision of a roof (with supports similar to the pavilions) over the duplexes’ gang mailbox;
 - i. Corrected labeling of the maintenance garage as building Q; and,
 - j. Utility meter locations and screening.
3. **Prior to issuance of a certificate of occupancy**, the project engineer must certify in writing that, among other things, the project EPSC plan as approved by the Department of Public Works has been complied with and final site stabilization has occurred. This certification shall be filed with the Department of Planning & Zoning.
4. **At least 7 days prior to issuance of a certificate of occupancy**, impact fees calculated on the net new square footage of the development shall be paid to the Department of Planning & Zoning. Impact fees may be reduced as determined by the manager of the City’s Housing Trust Fund for the provision of inclusionary housing units.
5. **Prior to issuance of a certificate of occupancy**, the project engineer must certify in writing that, among other things, the project EPSC plan as approved by the Department of Public Works has been complied with and final site stabilization has occurred. This certification shall be filed with the Department of Planning & Zoning.
6. All construction within the public right-of-way (including, but not limited to, the walkways for the Grove Street duplexes) shall require an encumbrance permit and/or license subject to approval by the City Council in consultation with the Department of Public Works.
7. A 72-space parking waiver is included in this approval. This waiver is contingent on the implementation of the February 16, 2015 parking management plan. Implementation does not include new or reconfigured parking spaces. Any new or reconfigured parking will require separate zoning permit review.
8. This approval incorporates the Stormwater Administrator’s 3/23/15 written approval of the Erosion Prevention and Sediment Control Plan.
9. This approval incorporates the Stormwater Administrator’s 3/23/15 written approval of the Stormwater Management Plan.
10. This approval incorporates the proposed improvements to Schmanska Park’s access and parking lot as agreed to by the Department of Parks & Recreation dated November 24, 2014.
11. The proposed development sign is subject to a separate zoning permit and is not included in this approval.

12. This project approval includes all "Recommended Mitigation Measures" and pedestrian improvements as noted in the October 2013 Traffic Impact Study and March 25, 2015 Grove Street Development – Review of March 2015 Traffic Improvements memo, respectively.
13. This project approval includes the 2/13/15 "Phasing Plan" and related 2/16/15 "Anticipated Construction Phasing Schedule." Phases 1A & 1B, 2A & 2B, and 3A shall include construction of all 35 inclusionary housing units. Alternation of this schedule shall require separate zoning permit review.
14. Days and hours of construction shall be Monday-Friday 7:00 am – 5:00 pm; Saturdays 8:00 AM – 3:00 PM. No construction on Sunday.
15. A State Wastewater Permit will be required for water and sewer service. It is the obligation of the owner/applicant to seek this and any other required additional permits.
16. Building intercom systems are recommended to maximize the personal safety of the tenants.
17. Standard Permit Conditions 1-15 as adjusted for the proposed phasing and build-out schedule.

Scott Gustin

From: Patrick O'Brien <pobrien@SDIRELAND.COM>
Sent: Tuesday, February 24, 2015 3:24 PM
To: Scott Gustin
Cc: Bryan Currier; Steve Roy
Subject: FW: Grove Street Water/Sewer Review

Hello Scott, if you follow this email trail you will see that Steve Roy has a few minor requests and is ok having them be conditions of approval. What do you think?

His original comments are in black and our reply is in blue and his final comments are in red and those are the ones I am referring to.

Patrick

From: Bryan Currier [mailto:bcurrier@olearyburke.com]
Sent: Tuesday, February 24, 2015 3:21 PM
To: Patrick O'Brien
Subject: FW: Grove Street Water/Sewer Review

Patrick,

Steve Roy has submitted some minor revisions he would like us to correct on the water and sewer detail sheets. He said that he was alright with having the changes be made part of our conditions of approval for the final application, since we have already submitted to the City.

Thanks,
Bryan

From: Steve Roy [mailto:SRoy@burlingtonvt.gov]
Sent: Tuesday, February 24, 2015 3:10 PM
To: Bryan Currier
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: RE: Grove Street Water/Sewer Review

Sure. As long as it makes into the construction-ready set of drawings.

Steve

From: Bryan Currier [mailto:bcurrier@olearyburke.com]
Sent: Tuesday, February 24, 2015 3:08 PM
To: Steve Roy
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: RE: Grove Street Water/Sewer Review

Good Afternoon Steve,

Unfortunately, the plan set has already been submitted for Final Approval. Can we make these changes a condition of approval? We are expecting to have a few conditions from the board that are going to have to incorporate into the plans.

Let me know if you have any questions

Thanks,
Bryan

From: Steve Roy [<mailto:SRoy@burlingtonvt.gov>]
Sent: Tuesday, February 24, 2015 2:33 PM
To: Bryan Currier
Cc: Paul O'Leary; pjobrien66@comcast.net; Norm Baldwin
Subject: FW: Grove Street Water/Sewer Review

Hi Bryan,

Sorry this took so long. My DRAFT comments below are in RED.

Thanks,
Steve

Steve Roy, PE
Burlington Public Works
53 Lavalley Lane
Burlington, VT 05401
T: 802.865.7258
F: 802.864.7653

From: Bryan Currier [<mailto:bcurrier@olearyburke.com>]
Sent: Thursday, January 15, 2015 9:10 AM
To: Steve Roy
Cc: Paul O'Leary; Guillermo Gomez; Norm Baldwin; Patrick O'Brien (pobrien@SDIRELAND.COM)
Subject: RE: Grove Street Water/Sewer Review

Good Morning Steve,

Please find below our responses below to the Burlington Public Works review of the water/sewer systems for the proposed 243 unit apartment complex at 140 Grove St.

Water Comments:

1. The Utility Plan (Sheet S3) calls for C900 pipe but the Water Detail (Sheet S16) has a DI pipe specification under PVC Pipe and DI fittings. Change S16 sheet to include the C900 DR14 (305 psi) PVC pipe spec and C907 for molded PVC fittings. Include tracer wire, tracer wire test stations (if valves are >500' apart) and magnetic warning tape stating "Caution – Buried Water Line Below" ~~approximately 3' below grade. We use tracer wire and test stations from Copperhead Industries.~~

Sheet S16 – Water Details has been updated to include the C900 DR14 (305 psi) PVC pipe spec and C907 for molded PVC fittings. The typical water trench detail has been updated to include tracer wire from Copperhead Industries as well as warning tape. Tracer wire test station were not required because the valves are <500' apart.

Sheet S16 still contains references to DI pipe in Section 1.2 and 1.8. Hydrant detail still shows DI pipe as well. Change thrust block on hydrant elbow to 2'x2'x3' precast.

2. Add/Move valves to have valves on each leg of a tee.

Sheet S3 – Utility Plan has been updated to have gate valves on each leg of the tees proposed with the new 8" C900 water main. OK, great.

3. Sprinklered building I needs a fire hydrant within 100' per NFPA 1.

Sheet S3 – Utility Plan has been updated to show a proposed hydrant within 100' of Building I. The hydrant is proposed to be located west of the building. OK, great.

4. Hydrant doesn't meet City specifications. I will send our detail sheet with this review sheet. Sheet S16 – Water Details has been updated to have the hydrant detail meet City specifications. Section 1.6 on fire hydrant does not include City requirements. We've worked with the local suppliers to develop a Kennedy "Burlington Spec" hydrant. Please just reference that.

5. Add mechanical restraint at all fittings in addition to thrust blocking. Sheet S16 – Water Details has been updated to have the thrust block detail include mechanical restraint at all fittings. Section 1.3 (incorrectly called 1.2) on Sheet S16 only references retainer glands on vertical bends and not everywhere as you said above. Also PVC pipe requires a restraint specifically for PVC pipe. Reference Megalug 2000PV or equal.

6. See Burlington Water Details Sheet for valve specification. Sheet S16 – Water Details has been updated with a valve specification that meets the city's standards. As per our Detail Sheet all valves in Burlington are open right (clockwise). Please add to Section 1.4.

7. Agreements and easements are required for the off-site water line extension. All of the agreements and easements have been obtained for the off-site water line extension. OK, great.

8. Even though our hydraulic model says the water main extension from Colchester Ave is sufficient, the cost of upsizing this main to 10" is negligible and would provide an added factor of safety. The proposed water main (C900 PVC) will have an inner diameter of at least 8". Fine.

9. Consider elimination of dead ends by looping water mains around the site. Due to the added expense and expected water pressures we are not proposing to loop the water mains around the site. Fine.

Sewer Comments:

1. DPW will take ownership, operation and maintenance of the proposed pump station if the following conditions are met:

It is our intent to have the City of Burlington take ownership, operation and maintenance of the proposed pump station. Fine.

- a. The proposed Multitrode pump controller is replaced with our standard Siemens/Evoqua LC150 duplex pump controller with A1000 pressure transducer and backup float.

Sheet S14 – Pump Station Details has been updated to have the controls replaced with the city's standard controls with transducer and backup float. OK, great.

- b. A Mission Communications M-800 Real Time monitoring system be installed and wired to temporarily disable the pump station when a signal is received from CSO manhole R1.12 on Colchester Avenue. With its built in digital and analog inputs, add wet well level, pump status/runtimes, high and low wet well alarms, and power failure.

Sheet S14 – Pump Station Details has been updated to include the real time monitoring system. OK, great.

- c. The control panel include an auxiliary power hookup for a future generator purchase. Sheet S14 – Pump Station Details has been updated to include auxiliary power hookups for a future generator. OK, great.

- d. A pump is selected with the best possible total efficiency (pump plus motor). If the horsepower is greater than 5, then three phase power is required.

The pump is expected to be around 7.5 hp and will be required to have three phase power. OK.

- e. The panel is UL listed.

Sheet S14 – Pump Station Details has been updated to have the panel be UL listed. OK, great.

- f. An easement is drafted allowing city personnel to access the site for pump station and force main maintenance.

Sheet S3 – Utility Plan has been updated to show an access easement to the City for pump station and force main maintenance.

There's nothing found on S3 pertaining to this. Easement will need to be a separate, legal, document.

- g. The access road to the station is expanded and paved for better access to the wet well, storage tanks and valve pit.

Sheet S3 – Utility Plan has been updated to show the access road being expanded and paved for better access to the station

In order to clean the wetwell and storage vaults the front end of our Vactor needs to be within 6' of the access manholes. Please make the necessary modifications to enable us to clean these structures.

- h. The force main material is changed from PVC to fusion-welded HDPE with an attached tracer wire that terminates in the valve pit and at a test station in the right-of-way near the existing sewer manhole. The force main design should address the relatively high coefficient of thermal expansion of HDPE.

Sheet S13 – Sewer Details has been updated to change the force main to fusion-welded HDPE with attached tracer wire. The test station in the right of way has also been included. The force main design has addressed the relatively high coefficient of thermal expansion of the HDPE pipe by burying the pipe at minimum 6' underground where the temperature fluctuation is minimal.

Provide specification on HDPE force main (i.e. SDR, IPS or DIPS).

- i. The force main out of the wet well remains as ductile iron until after the valve pit cross.

Sheet S14 – Pump Station Details has been updated to have the force main out of the wet well remains as ductile iron until after the valve pit cross. OK, great.

- j. The wet well bracket get moved up close to the access hatch.

Sheet S14 – Pump Station Details has been updated to have the wet well bracket moved up closer to the access hatch. OK, great.

- 2. Given this station's size and proximity to buildings S and T, consider adding an activated carbon vent pipe on the station wet well to reduce potential odors.

Sheet S14 – Pump Station Details has been updated to include an activated carbon vent pipe on the station wet well and storage tanks.

Provide specification.

- 3. This note is just a comment that the gravity sewer pipes seem quite deep. As seen in the review above, we try and keep them in the 5' to 9' depth whenever possible.

Due to the topography of the site and the state separation requirements the sewers have been designed with a minimum depth of 6.61' and maximum depth of 13.21' with an average depth of 10.02'. Fine.

You had previously stated that Champlin Associates was the local rep the city uses for pumps and controls. Please see below the comments from Jon Champlin that have also been included on Sheet S14 – Pump Station Details.

Please let me know if you have any questions

Thanks,
Bryan

From: Bryan Currier
Sent: Tuesday, December 02, 2014 8:58 AM
To: 'Jonathan Champlin'
CC: Paul O'Leary
Subject: RE: Grove Street Water/Sewer Review

Good Morning Jon,

Thank you very much for your comments. I have included the changes in the plans. We will not be requiring explosion proof pumps.

Thanks,
Bryan

From: Jonathan Champlin [<mailto:jon@champlinassociates.com>]
Sent: Monday, December 01, 2014 6:05 PM
To: Bryan Currier
Cc: Paul O'Leary
Subject: RE: Grove Street Water/Sewer Review

Hi Bryan-

Couple of notes:

Floats should be mechanical, mercury not allowed in the state.
Plan mentions intrinsically safe. Should the pumps be explosion proof as well?
Pump condition is looking to be a 7.5 HP so 3 phase power would be required by City.

Let me know if you have any questions.

Jon Champlin

From: Bryan Currier [<mailto:bcurrier@olearyburke.com>]
Sent: Monday, December 01, 2014 1:22 PM
To: Jon Champlin (jon@champlinassociates.com)
Cc: Paul O'Leary
Subject: Grove Street Water/Sewer Review

Good Afternoon Jon,

I am working on a 243 unit development project for SD Ireland located at 140 Grove St Burlington. We have submitted a set of water/sewer plan to the City of Burlington Public Works and Steve Roy has given us his comments (see attached). He mentioned that Champlin Associates is the local rep they use for the pump station controls and pumps. Can you please take a quick look at the pump station designs (see attached) and let me know if you have any additional comments on the stations configuration.

Thanks,

Bryan Currier, EIT
O'Leary-Burke Civil Associates
1 Corporate Drive | Essex Jct., VT 05452
p: (802)878-9990
bcurrier@olearyburke.com

From: "Roy, Steve" <SRoy@burlingtonvt.gov>
To: pjobrien66@comcast.net
Cc: "Guillermo Gomez" <ggomez@burlingtonvt.gov>, "Norm Baldwin" <nbaldwin@burlingtonvt.gov>
Sent: Thursday, November 20, 2014 8:40:21 AM
Subject: Grove Street Water/Sewer Review

Hi Patrick,

Here are my comments on your development plans for water & sewer. Please forward to Paul O'Leary after you've had a chance to review, and let him know that Champlin Associates is the local rep for all the control stuff we use as well as pumps. I am happy to sit down with you folks to discuss further.



Fax (802) 658-7665

Burlington Fire Department
Office of the City Fire Marshal

132 NORTH AVENUE • BURLINGTON, VERMONT 05401



(TTY) (802) 865-7142

Plan Review and Inspection Services: (802) 864-5577

Public Information and Education: (802) 864-6923

www.burlingtonvt.gov/fire

RECEIVED

26 March 2015

MAR 27 2015

Mr. Scott Gustin, Project Manager.
Department of Planning and Zoning
City of Burlington
149 Church Street
Burlington, VT 05401

DEPARTMENT OF
PLANNING & ZONING

RE: Final Plat Review – 140 Grove Street (S.D. Ireland property, Grove Street Apartments): 15-0801PD

Mr. Gustin,

I have completed review of the final plat plan set dated 3 September 2014 and prepared by O'Leary – Burke Civil Associates, PLC for this project. This set of plans was stamped as received by the Department of Planning and Zoning on 18 February 2015 and provided to this office for review on 23 February 2015.

I have reviewed this final plat plan against the applicable requirements of Burlington Code of Ordinances Chapter 13, Vermont Fire and Building Safety Code (2012), and NFPA 1 (2012) pertaining to fire department site access, water supply, and fire protection system requirements and note that no additional modifications to this plan, beyond those documented below, are required at this time based on the information provided by the applicant.

Based on this full set of plans, the following items are called out for resolution:

1. **Sheet S5: Relocate the existing fire hydrant located at the intersection of Chase Street and Grove Street to the south on Grove Street approximately 25 feet to alleviate a long-standing turning radius obstruction for fire apparatus turning south on Grove Street from Chase Street.** Relocation of the existing fire hydrant will also negate the requirement for a protective bollard. The current parking arrangement on Chase Street, the location of the hydrant and bollard on Grove Street, and the location of the utility pole on Grove Street opposite the hydrant have significantly restricted the ability for our larger fire apparatus to turn from Chase Street onto Grove Street for a number of years.

(Note: this requirement has not been previously called-out as this department was not provided with a set of off-site improvement plans prior to the set dated above.)

2. **Sheet S8: Speed bump removal and relocation: specification of new speed bump design is not provided for review.** This department approves the current "speed table" design as utilized in other City projects and as provided previously by the Department of Public Works Engineering Department.
3. **Resolution of BFD radio systems modifications (in accordance with BCO 13-63 through BCO 13-68):** The applicant advised this office in a letter dated 16 September 2014 that radio signal strength testing was completed by Burlington Communications, and was determined to meet the minimum requirements for mobile and hand – held fire department radios under existing conditions. Additional radio signal strength testing shall be conducted by an approved technician prior to completion of building construction and, if required, modifications conducted to boost signal strength in the event that the minimum requirements of BCO 13-63 to 68 are not met at

that time. Additionally the applicant has corresponded with the Chief Engineer of the Burlington Fire Department regarding additional BFD radio systems modification (installation and programming of BFD Channel 16 in the Burlington Emergency Communications Center). The applicant shall continue coordination with the Chief Engineer of the Burlington Fire Department to resolve this open issue prior to issuance of the certificate of occupancy for this project. This office requests that resolution of this issue be carried as a condition of the final certificate of occupancy for this project.

Please contact this office with any questions or comments pertaining to this review.

In Fire and Life Safety;



Battalion Chief Barry J. Simays, CFI
Fire Marshal



Office of Engineering
645 Pine Street, Suite A
Burlington, VT 05402
802.863.9094 P
802.863.0466 F
802.863.0450 TTY
<http://www.burlingtonvt.gov/DPW/>

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Norman Baldwin, P.E.
CITY ENGINEER

Memo

Date: April 9, 2015
To: City of Burlington Planning & Zoning
Patrick O'Brien - SD Ireland
From: Laura Wheelock P.E.
Public Works Engineer
Subject: SD Ireland Grove Street Development

RECEIVED
APR 10 2015
DEPARTMENT OF
PLANNING & ZONING

This memo is to certify the review of the work being proposed within the right-of-way for the above mentioned development/project. The review and comments are based on the 100% plan set as received February 18, 2015.

As reviewed by the Department of Public Works (DPW) we find the following:

1. The proposed improvements including but not limited to new sidewalk throughout the project area meets City Standards.
2. Improvements at the pedestrian crossings of Grove Street in the vicinity of the park and crossing north of the park as shown on the 100% plans are acceptable with signage, RRFBs, and bumpout for northern crossing.
3. DPW has reviewed the traffic plan with update provided 3/25/15 and recommendations. DPW has no further comments and accept the recommendations in the study.
4. At the north end of Grove Street the traffic study recommended moving the no parking here to corner sign 25'-0" to the south. The developer will be required to submit a traffic request to DPW for this recommendation which will need to be reviewed and approved by the DPW commission. DPW does not required approval of this recommendation prior to initiation of the project as it was only a recommendation of the study and not a requirement. DPW will require the developer to at least make the request.

April 9, 2015

RE: SD Ireland Grove Street Development

5. Clarifications to be made to the plans include:
 - a. Updating the crosswalk marking to match City Standard – This will be a 24" Paint with 24" clear space block pattern.
 - b. Updating the Car Parking and Roadway Area Detail to Match City Standard – This will be 3" of Asphalt, with 4-6" Fine Graded Crushed Stone, with 12" Dense Graded Crushed Stone. Typical Asphalt courses are 1" of Type IV over 2" of Type III.
 - c. Widening of the crosswalk ramps at the crosswalk at the park to be 6'-0", widening should happen to the south side of the crosswalk shown in the plans.
 - d. At the crosswalk from the parking lot to the park on the west side of the road, at minimum one tree should be removed to improve the alignment of the park path with the proposed sidewalk.
 - e. In the dividing island between Grove Street and the parking lot adjacent to the sidewalk DPW and Parks have asked that a permeable paver either open and filled with pea stone or closed and permeable be used in place of any vegetation. This treatment should also be considered in the narrow wedge that is created on the west side of the road between the proposed sidewalk and the new path leading into the Park.
 - f. The proposed sidewalk where the vehicle will cross the sidewalk should be constructed with an 8" thick section to meet DPW's standard at commercial drives. This includes, but is not limited to the drives at:
 - i. Garden Street
 - ii. Parks vehicle access into Schmanska Park
 - g. At the southern end of the project DPW has asked that the crosswalk markings at the 284 Grove Street development be removed from the project; as painting those crossings does not meet the DPW warrant for painted crosswalk.
 - h. At the look out structure the curb cut shown for bicycle access should either be removed as we do not require it be provided, or have a tapered approach so it allows for proper bicycle movement and does not resemble a curb ramp typical to a crosswalk.
6. DPW has asked that property lines and ROW boundaries be added to the all the plan sheets to clarify the work that is occurring in the various areas.
7. DPW is concerned with the placement of stairs within the ROW at Units B and C. It is our preference that no stairs be placed within the ROW should that area be required in the future. DPW is asking the DAB and DRB take our concerns regarding the placement of permanent structures in the ROW into consideration and remove the requirement placed on the developer to provide these connections at this location.

April 9, 2015

RE: SD Ireland Grove Street Development

DPW is in favor of providing a single pedestrian connection from to the north of Unit D that would connect the development's sidewalk network directly to the sidewalk on the east side of Grove Street.

Should a connection out the back of the Units be remain as a requirement the stairs should either:

- a. be pulled back so they do not encroach on the ROW
- b. connect the sidewalk to the stairs at Unit A and D and eliminate the stairs out of the units

Should none of these alternatives be found acceptable the developer will be required to enter a license with the City for the infrastructure that exists in the ROW. The lease will have a 10 year renewal with a 6 month revocation period should DPW require use of the ROW in this location. The developer will also be required to fully maintain the infrastructure within the ROW. License agreements are subject to approval of the City Council who will either approve or reject the use of the ROW and the license.

If you have any questions please contact me directly at LWheelock@burlingtonvt.gov or 802-540-0397.

Burlington Design Advisory Board

149 Church Street, City Hall

Burlington, VT 05401

www.burlingtonvt.gov/PZ/DAB

Phone: (802) 865-7188

Fax: (802) 865-7195

Matthew Bushy, Chair
Todd Thomas, Vice Chair
Ron Wanamaker
Sean McKenzie
Steven Offenhartz
Philip Hammerslough, Alt.
Jeremy Gates, Alt.



DESIGN ADVISORY BOARD Tuesday, March 10, 2015 Conference Room 12, City Hall, Burlington, VT MINUTES

Board Members present: Ron Wanamaker, Matt Bushey, Steve Offenhartz, Todd Thomas, Jeremy Gates (alternate), Phil Hammerslough (alternate)

Board Members Absent: Sean McKenzie

Staff: Scott Gustin, Mary O'Neil, Ken Lerner

Session I - 3:00-3:45 p.m.

15-0801PD; 140 Grove St (RL, Ward 1) Ireland Grove Street Properties

Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 223 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements

Also present:

Michael Dugan, Robin Jeffers, Scott Ireland, and Patrick O'Brien

Motion by Matt Bushey: I move we approve the proposal and forward to the DRB with the following recommendations:

1. Dumpster in front of unit H should be moved farther away from the adjacent duplex.
2. Intersperse the inclusionary units throughout the project.
3. Roof (with supports similar to pavilions) should be provided over the Garden Street exterior gang mailbox.
4. Pedestrian path should be added from 1st parking lot at NW corner to Grove Street.
5. As part of final plat approval:
 - a. Revised boundary survey to depict the merger of the two primary parcels on which the proposed development will be built;
 - b. Corrected labeling for the maintenance garage (i.e. should be building Q);
 - c. Depiction and screening of utility meters; and,
 - d. Installation of concrete crosswalks within the development if feasible.

2nd – Todd Thomas

Vote 6-0-0

Motion carries.

Session II - 3:45-4:30 p.m.

AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN

FOR THE PROJECT AT:

140 Grove Street

HAS BEEN FILED WITH THE CITY OF BURLINGTON
STORMWATER MANAGEMENT PROGRAM IN ACCORDANCE
WITH CHAPTER 26 OF THE BURLINGTON CODE OF ORDINANCE

THIS REQUIRES THAT MEASURES BE INSTALLED OR TAKEN TO
PREVENT SEDIMENT FROM LEAVING THE SITE AND ENTERING
WATERWAYS AND IMPACTING CITY INFRASTRUCTURE
(RIGHT OF WAY AND STORMDRAINS)

FOR QUESTIONS OR TO REPORT SEDIMENT LEAVING THE SITE
CALL 802-863-4501

~~This notice to be posted in full view at all times during earth~~
disturbance. Additional conditions on attached.

Megan
Moir

Digitally signed by Megan Moir
DN: cn=Megan Moir, c=US, o=City of
Burlington DPW, ou=Stormwater
Program, email=mmoir@burlingtonvt.gov
Reason: I am approving this document
Location: Burlington, VT
Date: 2015.03.23 21:27:22 -0400

Plan Approved by: _____

Burlington Stormwater Program

Date: _____



**Burlington Department of Public Works
Stormwater Program**

234 Penny Lane (Water Plant)

Burlington, VT 05401

PH: 802-540-1748 Email: mmoir@burlingtonvt.gov

PH: 802-863-4501 Email: gjohnson@burlingtonvt.gov



Erosion Prevention & Sediment Control Plan

This questionnaire and associated EPSC plan sheets are required for projects that:

- 1) Require Level II or III Certificate of Appropriateness or Major Impact zoning applications and which will disturb more than 5000 sq. ft. of land;
- 2) Do not require a zoning permit but which will disturb more than 15,000 sq. ft. of land; or
- 3) The Stormwater Program deems this level of detail necessary for the protection of receiving waters.

You must also provide an EPSC plan sheet(s) indicating the flow of stormwater, the locations of all erosion prevention and sediment control measures (silt fence, catch basin protection, stabilized construction entrances, erosion control matting etc.) and a detail sheet including any measures.

1. Project Location SD Ireland Grove St Concrete Batch Plant
2. Zoning Permit Address (if different from above): 100 Grove Street, Burlington VT 05401
3. Brief Project Description (i.e. building foundation, swimming pool, etc.)
Conversion of the existing concrete batch plant to a 232-unit apartment complex.
4. Owner Name: Ireland Grove Street Properties
5. Owner Mailing Address: 193 Industrial Ave, Williston VT 05495
6. Owner Phone: 802-863-6222 x242 6. Owner email: pobrien@sdireland.com
7. Contractor Name: SD Ireland ☐ Contractor not known at this time
8. Contractor Phone: 802-863-6222 x242 9. Contractor Email: pobrien@sdireland.com
10. Estimated Project Start Date 36-60 Months Estimated End Date _____
11. Area of Land Disturbance 570,000 sq. ft.
12. Total proposed (existing + new) amount of impervious: 6.62 sq. ft.
13. Estimated distance in feet from disturbance to nearest:
 - a. City Sidewalk or Street 0 ft
 - b. Drainage Ditch 0 ft
 - c. Catch Basin (storm drain) 0 ft
 - d. Lake/River/Stream 55 ft
14. Does your project require a State Construction Stormwater Permit (9020 or INDC) ? ☒ Yes ☐ No
(You will be required to submit proof of your authorization to discharge prior to initiation of earth disturbance).

Required Plan Sheets:

14. Plan sheet(s) MUST BE ATTACHED showing the following:

- | | |
|---|--|
| ☒ Limits of disturbance | ☒ Direction of stormwater flow on site |
| ☒ Location of stockpiles (if any) | ☒ Location of sediment control BMP's (silt fence etc.) |
| ☒ Location of stabilized construction entrances | ☒ Stabilization measures |
| ☐ Phasing plan (if appropriate) | |

15. Detail sheet(s) MUST BE ATTACHED and include details for all EPSC measures listed on the EPSC Plan Sheet.

Additionally, notes must be included related to:

- ☒ Daily inspection of roadways and sweeping as necessary (mandatory)
- ☒ Dewatering measures (if applicable)
- ☒ Temporary site stabilization requirements
- ☒ Final site stabilization requirements
- ☒ Winter site stabilization (for disturbance after November 1)
- ☒ Inspection requirements

EPSC QUESTIONNAIRE

A) Do you anticipate the need for any dewatering of excavations during the construction? ☐ Yes ☒ No

- If yes, please indicate which plan sheet has details for how dewatering operations will be managed to prevent the discharge of sediment laden water. N/A

B) Will excavated soil be stockpiled on the site? ☒ Yes ☐ No (If yes, show locations and EPSC measures for stockpile on plan sheet)

- If no, where is the ultimate disposal of excess soil? N/A

C) Do you plan to park construction vehicles on or disturb City owned property like the greenbelt area? ☒ Yes ☐ No

- If yes, tell us how you agree to repair all disturbances or damage to City owned property and provide a written approval from the City allowing construction vehicles to park on City owned property.

As part of the project the public parking lot to Schmanska Park on Grove street will be upgraded along with adding handicap access to the park. Also, additional sidewalks will be added along Grove St and Patchen Rd.

- If no, then please monitor all construction and visitor vehicles and advise all not to park on City owned property.

E) Will stockpiles or disturbed soils be present and/or exposed after Nov. 1st of any construction year? ☒ Yes ☐ No

- If yes, tell us how you plan to stabilize any stockpile and/or disturbed soils.

Please refer to EPSC plans EC2 and EC3 for winter guidelines.

Do you agree to abide by the following conditions?

- ☒ Y ☐ N Applicant will call 863-4501 or email mmoir@burlingtonvt.gov at least 24 hours prior to initiating earth disturbance and submit the name and contact (cell phone and email) of the contractor and erosion control coordinator for the project
- ☒ Y ☐ N Applicant will post the attached notice in a visible location
- ☒ Y ☐ N I acknowledge that it is the responsibility of the owner and his/her representatives to ensure that:
 - sediment does not enter surface water bodies (streams, ditches, ponds, lakes, wetlands etc.)
 - sediment does not enter City conveyance infrastructure (catch basins, sewers etc.) and
 - All sediment is removed from the city ROW (sidewalks and roadways) by the end of each work day.
- ☒ Y ☐ N Sediment control measures will be installed prior to the initiation of earth disturbance.

- ☒ Y ☐ N During the non-winter construction season (April 15 – November 1): After an initial 14 day period of initial disturbance, temporary or permanent stabilization (mulching, erosion control matting or tarps for stockpiles, or other approved method) of exposed areas and stockpiles will occur at the end of each work day unless:
- Earthwork is to continue in the area within the next 24 hours and there is NO liquid precipitation forecast for the next 24 hours; or
 - If work is occurring in a self contained excavation (no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation or utility trenches).
- ☒ Y ☐ N During the winter construction period from November 1 to April 15, any new disturbance must be temporarily or permanently stabilized (mulching, erosion control matting or tarps for stockpiles, or other approved method) will occur at the end of each work day unless:
- Earthwork is to continue in the area within the next 24 hours and there is NO liquid precipitation forecast for the next 24 hours; or
 - If work is occurring in a self-contained excavation (no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation or utility trenches)
- ☒ Y ☐ N The perimeter of the site and all BMPs will be inspected at the end of each workday to ensure that sediment will not leave the site. If sediment has travelled beyond the site boundary, it shall be swept up or otherwise removed and deposited on-site in an upgradient area at the end of each work day.
- ☒ Y ☐ N The owner and his/her representatives shall abide by the best management practices (BMPs) indicated in this plan and conditions and in the Vermont DEC Low Risk Site Handbook for Erosion Prevention and Sediment Control (2006). Contact 802-863-4501 for a hard copy or go to the web:
http://vtwaterquality.org/stormwater/docs/construction/sw_low_risk_site_handbook.pdf
- ☒ Y ☐ N If soils will be exposed after November 1st and winter construction has not been permitted the project will notify DPW prior to October 15th and ensure that sediment control is installed PRIOR to soil freezing. If the project is completed during the winter months, an additional inspection will be required to ensure that the site is buttoned up for the winter.
- ☒ Y ☐ N Within 48 hours of reaching final grading, the exposed soil will be seeded and mulched or covered with erosion control matting (for slopes steeper than 3:1 or high wind prone areas). Erosion control matting is preferred.
- ☒ Y ☐ N The owner will contact DPW to schedule a stabilization inspection when site work is finished and stabilization measures (seeding and mulching or matting) have been installed.

AGREEMENT

By filling out and signing this plan, I agree to abide by the terms and conditions outlined above. Failure to follow this plan can result in a stop work order by the City of Burlington, fines, or both.

By: ☒ Owner ☒ Contractor

Scott D. Ireland

Name

[Signature]

Signature

2-10-15

Date

Additional Conditions of Approval:



Megan Moir, CPESC, CPSWQ
Stormwater Program Manager

Direct 802 540-1748
cell 802 734-4595
mmoir@burlingtonvt.gov

Post Construction Stormwater Management Plan Acceptance

Location: 140 Grove Street

Project Description: Planned Unit Development with 19 new apartment buildings (232 units), with associated amenity buildings, road, parking and site improvements.

Plan submitted by: O'Leary-Burke Civil Associates, PLC

Acceptance of the Stormwater Management Plan by the Burlington DPW does not absolve the owner, contractor or engineer (if applicable) from taking additional actions to ensure compliance with Chapter 26 of the Burlington Code of ordinances and with the conditions listed below

The stormwater management plan involves the reduction of 3.58 acres of impervious and management of stormwater runoff from 6.62 acres of redeveloped impervious via impervious disconnections, rain gardens, under-drained grass swales and a detention pond before discharging to the Winooski River.

Specific Conditions:

- Stormwater measures must be installed and maintained in accordance with the plans, and other materials submitted to DPW, including, but not limited to any attached sheet(s).
 - *Prior to commencing earth disturbance, the stormwater designer must provide the following and obtain written approval by the Stormwater Program*
 - *Planting plans for rain gardens and pond area*
 - *Specifications for "bio-swale" media mix*
 - Prior to the issuance of the Final Certificate of Occupancy, the stormwater designer shall submit
 - an **initial statement of compliance** certifying that the stormwater management system has been installed in substantial compliance with the plans and conditions included within this approval
 - **as-built information** for all stormwater infrastructure (CB, MH, treatment/storage areas, subsurface pipes etc.) and impervious surfaces in a CAD or GIS format
-
- The stormwater measures shall be inspected and maintained by the property owner annually by **July 1**. The property owner shall maintain evidence of inspections and maintenance on-site for 7 years. The owner must, upon request by DPW, provide access to the measures for inspection by DPW.
 - A maintenance and access agreement consistent with Section 26-3-26(B)(6) and appropriate filing fees for filing with the City Land Records with the City Clerk's Office must be provided to DPW within 30 days of DPW's provision of said form.

Megan
Moir

Digitally signed by Megan Moir
DN: cn=Megan Moir, c=US, o=City of
Burlington DPW, ou=Stormwater
Program, email=mmoir@burlingtonvt.gov
Reason: I am approving this document
Location: Burlington, VT
Date: 2015.03.23 21:01:06 -0400

Plan Approved by: _____

Burlington Stormwater Program

Date: _____

Patrick O'Brien

RECEIVED
FEB 18 2015

Subject: FW: Grove Street

DEPARTMENT OF
PLANNING & ZONING
EXHIBIT # 6

From: Jesse Bridges [mailto:jbridges@burlingtonvt.gov]
Sent: Monday, November 24, 2014 9:06 PM
To: Patrick O'Brien; Warren Spinner; Deryk Roach; Jen Francis
Cc: Scott Gustin
Subject: RE: Grove Street

Patrick,

This email serves to notice the Department's acceptance of the proposed improvements to Schmanska Park's access as well as its parking lot.

We appreciate your communication and cooperation.

Best,
Jesse

From: Patrick O'Brien [mailto:pobrien@SDIRELAND.COM]
Sent: Friday, November 21, 2014 9:03 AM
To: Warren Spinner; Deryk Roach; Jesse Bridges; Jeanne Francis
Cc: Scott Gustin
Subject: FW: Grove Street

To all, the improvements you requested yesterday have been incorporated into the attached plan.

Thank you,

Patrick

From: Bryan Currier [mailto:bcurrier@olearyburke.com]
Sent: Friday, November 21, 2014 8:46 AM
To: Patrick O'Brien
Subject: RE: Grove Street

Good Morning Patrick,

Changes have been made, see attached.

Thanks,
Bryan

From: Patrick O'Brien [mailto:pobrien@SDIRELAND.COM]
Sent: Thursday, November 20, 2014 4:30 PM
To: Bryan Currier
Subject: FW: Grove Street

Bryan, please put these two changes on your list.

Thank you

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DEPARTMENT OF
PLANNING & ZONING

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]
Sent: Thursday, November 20, 2014 4:00 PM
To: Patrick O'Brien
Cc: Jesse Bridges; Deryk Roach; Jen Francis; Scott Gustin
Subject: RE: Grove Street

Hi Patrick,

I have reviewed the adjusted landscape plans for the Grove St Apartments and Schamanska Park and Parking Lot. The adjustments for tree spacing, tree species and tree sizes are all correct on the plans so those have my approval.

Just want to confirm that the 4' 'Merchants' Metal fence has a break in it for our service road entrance into the park. Also the removable ballads need to be moved back behind the sidewalk in line with the fence. Those two corrections will need to be shown on the plans.

If you need an approval for those corrections for P&Z please send it to Jen or Deryk. Please let us know if you have any questions.

Thanks, Warren

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]
Sent: Thursday, November 20, 2014 9:55 AM
To: Warren Spinner
Cc: Jesse Bridges
Subject: FW: Grove Street

Warren, it would be greatly appreciated if you could get your final letter out soon. I can not submit for final application without it.

Thank you very much.

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

From: Patrick O'Brien
Sent: Wednesday, October 01, 2014 1:42 PM
To: 'Warren Spinner'; Jesse Bridges; Deryk Roach
Cc: Bryan Currier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin
Subject: RE: Grove Street

Warren, as promised here are the revised sheets. I look forward to receiving a letter from you that will satisfy the DRB condition.

Thank you,

Patrick

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FEB 18 2015
DEPARTMENT OF
PLANNING & ZONING

From: Warren Spinner [<mailto:WSpinner@burlingtonvt.gov>]

Sent: Wednesday, October 01, 2014 10:04 AM

To: Patrick O'Brien; Jesse Bridges; Deryk Roach

Cc: Bryan Currier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin

Subject: RE: Grove Street

Hi Patrick,

Thanks for sending these sheets along for our review and comment.

On sheet S8 'The park and parking lot', we will move/transplant the young tree that's currently in the way of the new proposed path. The one we planted this spring. The three trees proposed for the parking lot redesign shall be specified on the sheet/plans as: 2.5"-3" caliper B&B Acer freemanii 'Celebration'.

On the Grove Street Apartments 'Tree Plan', Bonnie you will need to modify the street tree placements as you enter the new development from Grove Street. There needs to be a clear site vision for vehicles at this intersection of a minimum of 30 feet in both directions as you enter Grove street. So I would suggest the first tree to the south as you exit on to Grove St be removed from the plan as well as the first two going north as you exit. Totaling 3 'Princeton Elm's being removed from the plan. You now can readjust the remaining five Elm trees in that north section of greenbelt.

The trees to the south of the project that you are proposing to plant 'around' are Green Ash. Planning ahead for the Emerald Ash Borer arrival which in time will kill all the ash trees in our area. I would encourage you to remove the Ash trees now and plant the whole section with new elm trees. It makes sense to do this now so you don't end up with a fragmented section of greenbelt when these Ash trees die and need to be removed.

That's all I have for comments related to landscaping at this point. Please let me know if you have any questions based on my comments.

Best, Warren



Warren Spinner, Certified Arborist

City Arborist

Burlington Parks, Recreation & Waterfront

645 Pine Street

Burlington, VT 05401

802-862-8245



@BTVparks

From: Patrick O'Brien [<mailto:pobrien@SDIRELAND.COM>]

Sent: Tuesday, September 30, 2014 9:26 AM

To: Jesse Bridges; Deryk Roach; Warren Spinner

Cc: Bryan Currier; Bonnie Kirn Donahue (bkirn@wagnerhodgson.com); Scott Gustin

Subject: Grove Street

RECEIVED
FEB 18 2015

DEPARTMENT OF
PLANNING & ZONING

Hello everyone, as previously mentioned, condition # 3 of my Preliminary Approval states that *"Prior to final plat application, written acceptance of the proposed improvements to Schmanska Park and its parking lot shall be obtained from the Dept. of Parks & Recreation"*.

I have attached sheet S8 of our plan set for your review and comment.

Also, condition # 4 states that *"Prior to final plat application, written acceptance of the proposed street trees along Grove Street shall be obtained from the City Arborist"*.

Warren, you will see from the plan that I will be forwarding you that we are proposing some Elm trees along the street. You will also notice that we are proposing to plant some between the existing trees south of the project. Please let us know how you feel about that.

I asked Bonnie Kirn at HKW to turn on the existing tree locations and I have not received that plan yet but I will forward it to you as soon as I get it, which will likely be at some point this morning, or she may send them directly to you.

It would be great if you could offer your comments to us via email so we can incorporate them into the plans and then get a revised set back to you so you can write your letters.

As always, a rapid response would be GREATLY appreciated.

Thank you all,

Patrick

Patrick O'Brien
S.D. Ireland Companies
193 Industrial Avenue
Williston, VT 05495
Office 802-863-6222 x 242
Cell 802-373-0096
e-mail pobrien@sdireland.com

Traffic update

MEMO



TO: Patrick O'Brien
FROM: Ben Swanson
DATE: March 25, 2015
SUBJECT: Grove Street Development – Review of March 2015 Traffic Improvements

DEPARTMENT OF
PLANNING & ZONING

In October 2013, RSG drafted the Traffic Impact Study (TIS) for the proposed Grove Street housing development in Burlington, Vermont. Since completion of this study, the applicant has been in discussions with Burlington Public Works (BPW) regarding the roadway and pedestrian improvements that will be completed by the applicant in association with this project. From these discussions, the following additional pedestrian improvements have been identified:

1. The proposed project will now install a second rapid rectangular flashing beacon (RRFB) at the mid-block crossing east of the Schmanska Park parking area. This existing pedestrian crossing will also receive a new bump-out to further improve pedestrian safety.
2. The section of Grove Street proximate to Schmanska Park will now be reduced to 24 feet.
3. The proposed site access width has been reduced from approximately 57 feet to approximately 43 feet at the pedestrian crossing. We understand this change was made at the request of Burlington DPW and has been reviewed and accepted by the Burlington Fire Chief.

These recent additions to the project plan further improve the pedestrian environment proximate to the project site. In conjunction with previously planned sidewalk, pedestrian crossing, and traffic calming elements, the proposed pedestrian improvements greatly enhance the existing infrastructure and provide an important pedestrian connection between South Burlington, Burlington, and Winooski.

Additionally, since completion of the original TIS, the total number of proposed residential units has decreased from 247 units (assumed in previous analysis) to 232 units. This results in a net decrease in overall site-generated traffic during both peak hours, as shown below. Any impacts from the project as currently proposed, would be slightly less than previously analyzed in the Traffic Impact Study. In addition to the substantial off-site pedestrian improvements planned for this project, and traffic impact fees levied by the City, we had previously recommended the applicant make a fair-share contribution towards large-scale improvements at the Colchester Avenue/Riverside Avenue/Barrett Street triangle and at the US 2/White Street intersection. Based on the updated trip generation, these contributions would be approximately \$5,500 and \$14,500, respectively.

FIGURE 1: PREVIOUS AND CURRENT SITE TRIP GENERATION

	Previous Study (247 Units)			Current Proposal (232 Units)			Net Change (-15 units)		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
AM Peak Hour	25	100	125	23	94	117	-1	-6	-7
PM Peak Hour	100	54	154	94	51	145	-5	-3	-8

Please feel free to contact us with any questions.



17. Using the City of Burlington's impact fee calculator, we calculate approximately \$53,600 in traffic impact fees to be associated with the proposed project.
18. We have also examined the proposed site access on Grove Street and have found that stopping and corner sight distances exceed design standards in both directions.
19. We conducted a turn-lane warrant assessment and found that a dedicated left-turn lane is not warranted on Grove Street at the site access.
20. We project average vehicle delays of less than 20 seconds per vehicle for traffic exiting the site driveway and expect the access to operate safely and effectively.
21. We have examined plans for proposed off-site traffic calming and pedestrian accommodation improvements prepared by O'Leary Burke Civil Associates including new sidewalks, crosswalks, new curbing, new lighting, and a proposed solar powered speed feedback display.
22. We believe the proposed pedestrian improvements greatly enhance the existing infrastructure. The proposed sidewalk section south of the project site provides a critical pedestrian link between South Burlington and Burlington and Winooski, creating a continuous pedestrian route between these areas. Additionally, improved curbing signage and striping at crossings north of the project site will help improve pedestrian safety for all pedestrians in the area.

11.2 Recommended Mitigation Measures

23. We recommend a cost sharing allocation be paid by the developer to the City of Burlington towards eventual improvements at the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.43% during the PM peak) and the estimated project cost (\$1.4 million)¹, we calculate a fair share contribution of approximately \$6,000.
24. We recommend a cost sharing allocation be paid by the developer to the City of South Burlington towards eventual improvements at the US 2/White Street intersection. This area currently experiences long delays and has been identified for future improvements by the Chittenden County Regional Planning Commission based on heavy use by existing traffic. While the proposed project does not cause this issue, we suggest the developer make a fair share contribution towards the ultimate intersection improvements based on the percent increase in peak hour traffic from the proposed project and the estimated cost of the overall improvement. Based on the larger peak hour percent increase in traffic (0.41% during the AM peak) and the estimated project cost (\$3.94 million)², we calculate a fair share contribution of approximately \$16,000.
25. Due to the high prevalence of rear-end collisions at the Patchen Road/White Street intersection we recommend advance intersection warning signs (MUTCD W3-3) be installed on both the eastbound and westbound, White Street, approaches to this intersection. Similar signs already exist on the northbound and southbound, Patchen Road approaches (Figure 36).

¹ The December 2011 Colchester Avenue Corridor Plan, conducted by Resource Systems Group indicated an approximate project cost of \$1.4 million to reconstruct the Colchester Avenue/Riverside Avenue/Barrett Street intersection triangle.

² The August 2007 US 2 Corridor Study, conducted by Resource Systems Group indicated an approximate project cost of \$3.94 million to reconstruct the US 2/White Street and US 2/Patchen Road intersections.



26. To enhance pedestrian connectivity and to improve pedestrian accommodations proximate to the project site, we recommend all off-site traffic calming and pedestrian enhancements identified by O'Leary Burke Civil Associates be installed prior to the first certificate of occupancy for the project.
27. In addition to the pedestrian enhancements proposed by O'Leary Burke Civil Associates we recommend the existing pedestrian warning signs at the crosswalk on Grove Street north of the paved public parking area (north of the project access) be upgraded to new fluorescent yellow warning signs (W11-2) and be accompanied by diagonal arrows indicating the crossing location (W16-7P) and that these signs be gate-posted for both northbound and southbound traffic prior to the first certificate of occupancy for the project. We recommend similar signage be installed at the second pedestrian crossing approximately 300 feet north of this parking area at the north end of the park.
28. Due to the tight turning radius for the southbound right-turn from Barrett Street onto Grove Street, we recommend the "No Parking Here To Corner" sign be relocated as indicated by O'Leary Burke Civil Associates, assuming Burlington Public Works is willing to accept the associated reduction in on-street parking.

In conclusion, we believe that if the above recommendations are followed, traffic associated with construction of the proposed Grove Street housing project will not cause unreasonable congestion or unsafe conditions on the surrounding road network.



Burlington Development Review Board

149 Church Street, City Hall
Burlington, VT 05401

www.burlingtonvt.gov/pz/drb

Phone: (802) 865-7188

Fax: (802) 865-7195

Austin Hart
Michael Long
Jonathan Stevens
Brad Rabinowitz
Missa Aloisi
Israel Smith
A. J. LaRosa
Alexandra Zipparo (Alt.)
Jim Drummond (Alt.)



BURLINGTON DEVELOPMENT REVIEW BOARD

Tuesday, April 21, 2015, 5:00 p.m.

Contois Auditorium, City Hall, 149 Church Street, Burlington, VT
Minutes

Board members present: Jonathan Stevens, Brad Rabinowitz, Alexander LaRosa, Jim Drummond, Ali Zipparo, Missa Aloisi, Michael Long, Israel Smith.

Board members absent: Austin Hart (Chair)

Staff members present: Ken Lerner, Mary O'Neil, Anita Wade.

I. Agenda

No changes.

Jonathan chairs meeting and beginning at 5:01. No changes to agenda.

II. Communications

Supplemental Communications;

III. Minutes

In packet with one set from April 7th for review.

Minutes to be reviewed at next deliberative meeting.

IV. Consent Agenda

1. 15-0881HO; 115 Glen Rd (RL, Ward 6S) Ranjit Singh / Danielle Rouleau

Establish bakery home occupation (Project Manager, Mary O'Neil)

Swearing in of those representing applicant at 5:04.

A communication is read from owner in front of board members.

J.Stevens, questions who is doing the baking.

Representative, home baking done on premises by Danielle Rouleau in her own kitchen.

J.Stevens, asks if anyone in audience willing to comment.

Robin, a neighbor wondered how much traffic at location

J.Stevens, applicant represents no deliveries or pickup

Representative, says applicant will not have deliveries

J. Stevens asked if she picks up supplies

Public hearing closed at 5:06pm

Will take up at deliberative.

V. Public Hearing

1. 15-0868CU; 404 College St (RH, Ward 1E) Dunlap Riehle

Change of use from duplex to single residential unit and boarding house (Project Manager, Ken Lerner)

J.Stevens, swears in Dunlap Riehle, Sharon Breshor, Nancy Kirby (339 Colchester Ave)

Dunlap, requests to use rear building for 6 residents.

K.Lerner, said it is not single apartment, but boarding house currently duplex and occupants limited to 4 parking spaces per unit and the language of ordinance is that owner lives on premise.

B. Rabinowitz had a question about whether there were 6 bedrooms

Debate continued regarding minimum safety.

Dunlap, said he lived in bldg for 16 yrs and was using only 4 of 6 units and now wants to use the maximum of 6 units.

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Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188

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B. Rabinowitz, questioned whether this was a boarding house
 KLerner, said it is a boarding house
 AZipparo, questions number of units
 JStevens asks for resident response
 Resident, responded with concern about renting rooms and about the criteria for boarding house and whether it's possibly for college students; questioned about adequate parking
 J. Stevens,
 Nancy Kirby said this is a boarding house. She said she lived near the house since 1994 and that the property is suppose to have only one car per two bedrooms. She mentioned she has worked with Code Enforcement on the problem. She questions when people will be made accountable for zoning.
 JStevens, questions Ken
 K.Lerner, recommends cleaning up parking;
 M.Long, mentions the parking plan from 2006
 KLerner, said this was never implemented
 MLong, questions how many residents per parking
 Dunlop, responds saying 4 residents for 5 parking spaces;
 JStevens, said property was resistant to parking plan
 Dunlop, said the plan was not depicting typical parking for this residence
 MLong, questions applicant on how many he thinks he needs
 Dunlop, responded that he would like to maintain what is there now.
 Closed Public hearing 5:18pm

2. 15-0801PD; 140 Grove St (RL, Ward 1) Ireland Grove Street Properties

Final plat review of PUD to demolish existing concrete plant and buildings, construct 19 new buildings for 232 residential units, clubhouse, and maintenance building with associated road, parking, and site improvements (Project Manager, Scott Gustin)

With this application, Board member A.J. LaRosa is recused
 J.Stevens, asks how many would be speaking on this application and swears in those wanting to speak
 P.O'Brien said he would speak on behalf of S.D.Ireland. He mentions there will be 35 inclusionary units with a phased in plan. Changes to plan involve a reduction of Building I to 2 stories, eliminating 11 units; not on the preliminary is the addition of a maintenance building; parking waiver of 72 spaces, 494 were required and 394 are proposed allowing for 1.7 per unit; will provide a 700 ft section of missing sidewalks which extend to South Burlington; rearranging sidewalks for residents to walk to the Winooski Medical Center; and there will be a on site management office at the site.

JStevens, swears in audience and applicants.
 P.O'Brien, representing SD Ireland organized the photos.
 JStevens, questions whether photos are part of packet or applicant will distribute them.
 JStevens suggests covering those points not resolved
 P.O'Brien is okay with this and thanks J.Stevens.
 JStevens, expresses concern with density; the fact they are primarily duplexes and feels challenged calling this low density based on the flexibility and variation; also noted the stat findings and recommendations.
 P.O'Brien, comments that he was here about a year ago since then spent time addressing concerns from residents and staff; proposing 232 units down from 245 units density reduction; preliminary 22 conditions from Board; addressed all concerns with the help from staff and residents; went back to notes and minutes; one item to go to DAB to ask for amount of density and then final before DRW; had unanimous DAB approval; specifically noted staff conditions before the Board;
 1) density; staff found an affirmative finding; density is a fine line; cannot do project without the density; mentioned the concern of neighbors; Building I was reduced 10 units;

2) added a building for maintenance as shown on an easel; this is not a preliminary request

3) parking waiver for 240 requesting 394 spaces; did apply for parking management plan

JStevens, asked for details on the parking management plan

P.O'Brien, said the requirements in the ordinance to meet waiver; mentioned exhibit 5a in packet; explained some of reasons the waiver was granted and gave an example why the adjustment down;

JStevens, asks if are there sidewalks that connect with medical center

P.O'Brien, said one section is missing to the south; sidewalks are in other direction but working with DPW to make routes safer and then the quality of walkability improves with site management

JStevens will review

AZipparo, asked for an expansion on CCA

P.O'Brien, encourages CCA to come down; describes route of bus for children; leave project proceed to flashing beacon to Chase; CCA said no but will review planning and will look at adjustment once project is approved

AZipparo, had questions on walkability and which crosswalk

P.O'Brien, indicates the crosswalk at park as shown on easel. Proposed hours of construction, Monday through Friday; changed Saturday hours 8am to 3pm; proposing lot line adjustments as shown on easel; mentions it should be in packet; proposed plat description; property owner agreements, trading land; changes boundaries as shown on easel as mentioned in preliminary; dimensions close to the same.

Parcel is in between South Burlington and GMP; GMP sold land to Ireland; Ireland sold to park district that was landlocked granting them a proposal for a trail and access to their land; will be donated to Winooski Valley Park District; trail access from Schmanska Park in yellow on display.

P.O'Brien, spoke in regard to inclusionary units and the conditions; bldg units at same time as market rate; first 70 half will be inclusionary

BRabinowitz, questioned how many buildings and what is the phasing plan

P.O'Brien, said 7 buildings that will be market rate; questions Ken if the plan was in the packet

K.Lerner, says the phasing plan is provided

ISmith which electronic document is it in?

P.O'Brien, provides hand out to Board members to show color scheme for changes to plan; one entrance; more duplexes; no parking on main street entrance; community center moved; and landscape plan, 2 garden areas 30'x80"

A.Zipparo, questions who will maintain landscaping

P.O'Brien, said maintenance of facility by Ireland

DPW, does not like stairways entering onto Row; can connect duplex walkways; enter into agreement with DPW; may have to remove in future; notes 2 middle duplexes on Grove.

DAB wants to connect inner sidewalk to Grove St sidewalk

J.Stevens, asked what was platform used for?

P.O'Brien, responded that it was a dump where mixing or washing took place;

J.Stevens asks about community center

P.O'Brien, describes community center

M.Aliosi, questions about inclusionary units

MLong questions if all inclusionary will be built

P.O'Brien, that is correct; made reference to site plan; all buildings on upper plateau are 35 ft or lower referring to landscape grading plan; biggest change has to do with staff request to make project ascetically pleasing to fit into neighborhood; has handout on what was proposed and will give to Board for deliberation;

JStevens requests them now

P.O'Brien, these elevations match; can see what was proposed; next package is going down Grove St.

JSteven asks if they are in chronological order

P.O'Brien, responded affirmatively

P.O'Brien, more street friendly; noted street scape detail; last is site plan; some things changed two access points initially, but restore Centennial Brook; thorough plan process to take place; felt what was gained by access was not more important than the environment. Fire Dept signed off on the one access; more smaller buildings; rear of garages are under ground; noted one entrance will serve both garages; moved community center to lower level; extension screening; garden area now 30 x 80 ft; landscape plan has apple, raspberry, blueberry, and edible plantings;

A Zipparo who manages them

P.O'Brien, Ireland family takes pride in being able to offer plantings; one open ended issue is DPW requirements regarding sidewalks; DPW does not like stair ways entering into right of way; connect or enter with City right away with plans around brook not changing; DPW asks for two minimal, but issue is around providing 4 sidewalks down to Grove St and the public right of way; DAB wants to connect sidewalks as was shown on displayed plans; worked out plan with DPW on handicap ramp up to parking area; Left lower level alone; on Grove St look right over bldgs; parks and rec plan, DPW does not want to maintain lookout structure using existing ramp; Park and Rec helped lay out paver walkway, picnic table, plaque on history of area and for S.D.Ireland;

JStevens asked about the ramp

P.O'Brien, said old trucks dumped there for mixing; provides a place for an overlook or having lunch; just another way Ireland makes something better;

JStevens, mentioned in regards to a community center, his entire life there was only one time he went to a center; questioned what makes people want to go to center;

P.O'Brien, we are doing this because we need housing and to come up with something others don't have; kitchen, library, upstairs gaming, as enter will have rental offices, may have staff stay later, outdoor pool and showers, feels it will be a real draw for our residents

BRabinowitz, questions the traffic asking about a staff report/agreement with DPW traffic improvements

P.O'Brien, recommended to pay fair share off site;

KLerner, said L.Wheelock, engineer from DPW might shed light on traffic

L.Wheelock said an intersection study was commencing for FY,2016 in 7/15 using traffic impact fees paying for improvements and pedestrian actualization; larger improvements not responsible to hold up project due to existing problems with intersection; focus on pedestrian safety;

JStevens, was aware of problems with both intersections and more cars mean more holdups;

LWheelock, taking into consideration concerns with traffic and safety improvements

JStevens, asked do you want to speak to Ben Swanson

BSwanson, traffic engineer from RSG said he had nothing specific to add

JStevens, said almost anything someone needs requires an offset trip and whether the study took this into account; asked how much study is based on assumptions or actual car count

BSwanson yes, collection of studies in suburban sites based on trip generation based on national data and similar studies calculates accordingly where there are no services; trip generation handbook based on non-core activities

JStevens questions Paul OLeary storm water manager

POLeary, increased storm water about a third; storm water using existing impervious surface. Centennial on impaired watershed but making corrections; each bldg group run off to lower plateau, two rain gardens, collection areas, Ireland going beyond what needs to be done; no infiltration into the watershed; some off-site improvements; collection swale and treatment system at parking lot with worked this out with DPW; parking lot collection swale, eliminates ponding; new sidewalk for pedestrian; solar power speed limit sign; two crosswalks and flashing beacons found to be effective; handicap ramp to park; adding lighting in park; installing new water main along have to put new line in improves fire flow with Grove St. 6" diameter, sanitary fluid pumps back into city system;

MLong, questions retention pond existing or proposed
 PO'Leary, existing
 MLong, reduces impervious and all storm water treated on site
 Applicant yes
 A Zipparo discharge into Winooski direct
 Applicant not direct
 AZipparo
 JStevens Audience response
 Applicant about mom and pop store; make the duplex a general store; do know the community center could contain store for the necessities and amend permit for this
 ISmith earlier condition placed on overload or shed light from staff
 K Lerner can show
 I Smith basic guidelines
 KLerner did nice job on sketches
 ISmith drawings, measurements on elevation drawings, 4.4.5 density in code, staff calculated heights on aver grade, question on where staff calculated grade;
 Applicant will see four lines; calculations
 ISmith cannot read calculations
 KLerner do have a full size set
 Applicant wanted to show how meeting aver finished rate
 ISmith existing 59 ft. grade would be integrated?
 Applicant yes
 I Smith only see one depiction of larger
 Applicant asked staff where to take illustrations
 Misa questions other bldg six unit understanding and whether rendering is correct;
 Applicant says it is accurate
 Misa site line going over with Applicant; roof should be certain height; if roof goes up doesn't show;
 Misa; questions roof line with MLong; and Ireland applicant
 Applicant intent is street scape; bldg is maybe too high; let's only concentrate on street scape where there is a complete set of street scape
 JStevens letting people in audience comment; now time to come forward
 Linda Tierney own couple bldgs. on Chase and Grove St 27 yrs, several concerns are traffic and safety; two bldgs. and 10 tenants; cannot get out of driveway during certain hours; corner of street is an issue with safety; parking; narrow at Chase and Grove street area causes fender benders, and side mirrors knocked off; safety with Fire or ambulance there is no area; CCA, buses cannot make the turn; impact fees will help but cannot see improvements can make; appreciate developers plans but details about a store in area and the discussion about a store and how considered low density project.
 JStevens would have to come back for
 Richard D steering committee, Patrick visited 4times and grateful; asked Dir of DPW; needs to be a partnership with city; structural problems; good there is a dialogue; city is not straightforward; City embarked on Colchester redesign and Grove St eliminated from the discussion; in addition scoping study of Riverside, Winooski bridge being pushed back to 2016 from 2015; the junction from RSG the confluence is one of highest in State of Vermont; DPW only states that there will be scoping; needs to be accountability by City; questioned at what stage does city make solid commitments to Grove St to maximum spot of concern and don't know what City will do about it; is it intent of City to walk half mile to catch bus.
 Sam B 50 Grove St, architect, longevity of process could have been alleviated but overall bldg design is poor with materials, disappointed with materials; memorial design is well done but not sure about execution; if fixed up could be reintegrated into design; memory of our road system; blinking lights can make big difference but need performance bonds that developer follow through on conditions;
 Salene C. following closely, appreciate responsiveness, inclusionary zoning, need for housing, substantive housing, echo concern around traffic and transportation; area high

traffic burden; infrastructure improvements not enough; concern about suburban island in city and reality of impacts and immediate neighbors and outside city.

E. Mahnke resident of Grove St; expressed concerns construction, traffic, F-35, height massing, recognized additional housing and retiring industrial use and developer addressed concerns by staff and Board; Act 250 criteria; appealed and reached agreements with developer; greater reduction in units; developers burdened with sights improvements and financing and realize got what could happen in reduction of units; original design reduction; second pedestrian sight; huge improvement with second crossing; need to work with DPW and 2nd light developer agreed to bump out at current crosswalk and issue is how far out; DPW agreed to 4ft bump out and developer agreed to 8ft;

JStevens we have no jurisdiction

Ernhard M total curb to curb, 8 ft. bump out mimics cars parked and increased safety and slow down Burlington; express desire to have change put into place

AZipparo Speed bumps

Ernhard bump out works better

A Zipparo appreciates this

E. Mahnke have worked with developer and feels not a lot of progress made; density issue; flaw in ordinance pertaining to density bonus needs to be changed; policy to set lower density limits within the lower density zone

Nate from Wildfire Assistant Development, speaking on behalf of Community and Economic Development Office; paying tax bill over 820,000 a year and helps mitigate tax roll; excited about green space and environment; ascethetic value is enhanced; extending elements pertaining to bond issue; improvements to park; Community and Economic Development Office supportive of project and to housing crisis in affordable housing and all price points;

AZipparo; glad City supportive; would that be about working for improvements to safety Nate W. cannot speak to that;

J.Francis Parks and Rec, engage with project over course of year; strategic choices, lighting, parking, continuity and health of area; any questions asked to Board

S.Buser city councilor; complimented developer on improvements from prelim to final; many things make this better; while since staff speaks to DRB and hope it continues; saw opportunity w development with number of families and children as to 18 children; missed mark for 3 bedroom and accommodate families; saw opportunity for UVM to create housing, City sharing with developer to reduce cars on street to work with developer and institutions; this could never get off ground and yet could not make it happen or with CTA can provide smaller bus; SSTA vans could go; frustrated with developer; as community not able to solve this problem; increase 5 cars avail to residents; reducing number of cars more; proposal for alternative energy and didn't hear about renewable energy; happy to hear it would take 4 yrs. as opposed to 7yrs; proposal to eliminate 2 parking spaces and not sure about the residents feel about that elimination; sad to represent the safety for children does not get the attention it would get in other areas of the city; recommend calling Irelands' bluff rather than Bayberry;

N.Warner; Winooski Park District, process with developer to incorporate path links to natural area across line; still working out details and board interest in working out strip and connection; optimistic that great project and opportunities;

Resident: understands less trucks and 394 cars needs to be pondered; invite Board to see how traffic backs up in neighborhood; appreciates developer's plans will not reduce volume;

N Kirby, great aunt and uncle use to own SD Ireland; concern about parking and shortcuts through park; mentioned accidents on interstate holds up ability to get to her home, problem on Riverside and Winooski; think hard about children's safety

Wheelock, DPW about questions;

E.Mahnke, did provide traffic study and calling device need 30% of residents; consideration to redo routes of bus; not guaranteed to remove parking spaces, still public process;

BRabinowitz; DPW recommends bump out 4ft. max allowed to 6ft
 AZipparo city recognize this as a problem; negotiating school bus difficult
 L.Wheelock, bus throws off timetable was response
 Applicant; knew larger issue was about traffic; doing their part to spend hundreds of thousands of dollars to improve safety of Grove St; speed bumps, narrowing road, blinking lights; in regard to the T, will visit again with CTA, Sharon, but need to prove there is the demand and will work with DPW for improvements; hydrant has to be moved 25 ft. uphill in anticipation of street improvements; housing Fletcher and UVM may regard a shuttle; offer suggestions about policy as Ernhard; Irelands have two plants and intent is to close one; City hall has turned to Ireland to request change to residential; if no approval for traffic will go to Williston, have 400 employees and will surpass any apartment plans; spoke to residents who complain about the closet neighbors sick of noise, pollution and would welcome residential use. Hope Board makes an informed decision.
 JStevens closes public hearing at 7:23pm

VI. Sketch Plan

1. 15-0896SP; 80-94 Colchester Ave (I, Ward 1E) Ed & Frank von Turkovich

Sketch plan review of proposal to construct 79 apartment units in single building, surface, and underground parking (Project Manager, Mary O'Neil)

M.O'Neil pointed out omission in staff report; Article 11 Sec 11.1.6. subsection for min requirements for district shall apply to the periphery but flexible within project;

JSteven ask about flexibility

JSteven sketch plan non swearing in

G.Rabideau. project contains units on Fletcher Place; working on project with best fit and those whose backyards adjacent property; propose area of gravel parking lots and construct new 3 story with 79 units; housing and workforce housing for Fletcher and UVM; show images on screen of newly proposed bldg.; visual impacts for Fletcher place; package for Board has visuals; context is institutional area and neighborhood of larger bldgs.; reconcile different context; how going to make bldg. fit into context; discussion of grade; shared driveway with 66 Colchester with easements and rights of way for underground parking; and further proposals for parking; proceed on basis of perceived parking with understanding that issue of future parking; many easements among the parcels important to residents currently; grade of bldg. is 4ft below Colchester Rd; nontraditional look with curved roof forms façade is moving

JStevens what direction looking at?

G.Rabideau Looking east on Colchester; spoke to colors chosen and curvature of bldg.; breaking up into smaller part; concern about neighbors; rhythm of Colchester and maintain integrity of Colchester; discussions with UVM and development of their projects; post development of storm water runoff less than current; technical review with need to speak with residents about pump of storm water in future; know project has sizeable inclusionary zoning; optimize and preserve more green space and more parking decision to go with one bldg.; materials used for windows; vertical siding on some portion; high quality materials; darker colors to mitigate; 96 Colchester residents in discussion, Affiliates in GYN larger owner of adjacent property; Utilities good in area; ample water, natural gas and infrastructure is in place; providing minimal 1 parking space per unit; F.Von Tukovich working on site for number of years; like to get feedback with Board and move ahead with concept

JStevens staff had comments

M.O'Neil using large plan; planned unit development; complication happens when 3 lots joined; setbacks should have 18ft and decreased as lot changes place; normally looking at only side yards and no rear yards; setback becomes nonconforming;

BRabinowitz dash line question

Mary side yard setbacks

G.Rabideau showing another plan of property lines and businesses;

BRabinowitz mentioned ravine
 G.Rabideau doesn't propose to develop ravine
 F.VonTurkovich said Mary's comments well taken and tried to accommodate suggestions
 G.Rabideau corrected site plan
 BRabinowitz setback goes through property line
 G.Rabideau our footprints come from aerial photos; difficult to trace footprints; 72 and 94 are not going to meet setbacks because built prior to code
 KLerner problem by changing property lines changing the setbacks required and setback is greater making it more nonconforming
 BRabinowitz is that a problem; but could take the bldg. down
 G.Rabideau can do this
 BRabinowitz not doing much for neighborhood that fosters bring together community;
 F.VonTurkovich looked at taking down bldg.
 G.Rabideau merging lots may not best thing to do
 BRabinowitz technical issue need to resolve
 MLong, eliminating bldg on street
 I Smith relying on Bldgs to keep to scale; not convinced about dark colors doesn't do much for bldg and dour look; likes curved roof;
 MLong, stay away with yellow and red
 JSteven noted Mary's comments
 BRabinowitz, see ravine as an opportunity and feature to use
 G.Rabideau may want to use as an open space
 JStevens on Motor vehicle traffic; place where emergency vehicles go need to check with hospital
 G.Rabideau will look into this and traffic light
 M.Aloisi, look at orientation of bldg to minimize looking over houses; awkward siting to look at
 M Long associated parking question
 F.VonTurkovich said 56 parking spaces, overflow parking, tenant base for UVM and walk to work;
 BRabinowitz see a nice urban solution; this looks like suburban solution; connections, green space, walkability,
 ALaRosa; linear garden unadorned dark door less façade is not respectful of streetscape;
 M.Aloisi, look at site that people will leave cars and focus should be front door and have to transverse parking to get to sidewalk
 F.VonTurkovich had questions about entrance
 M.ONeil people going to use shortest route
 AJLaRosa integrate front of bldg more inviting
 G.Rabideau will try to incorporate ideas moving forward; give access to parking lots to traffic lots;
 BRabinowitz others ways to create green space
 G.Rabideau traffic circulation
 I Smith making space pedestrian gateway to develop access
 G.Rabideau wants to make sure more access is shown
 AZipparo blinking yellow; collaborate with UVM
 JStevens public comments
 S.Butani and husband live at 31 Fletcher Place, reads statement of opposition; size and density not in conformity; support reasonable and well planned housing; out of character and not for long term residents; small units and short term rentals; not bringing long term residents to City; as prelim plan concerns; 3yrs involved with discussions with Turkovich attended various plans as ideas; none presented current plan; serious concerns about potential harm to neighborhood; two permit application approach; April 6th submitted zoning application attached is drawing march 11th app for 2 additional parking; view 2 applications that overlap and conflict; points out on schematic driveway access; breaches understanding with Fletcher place and pedestrian access and no parking; traffic negative impact; backup from lights and 80 new units creates traffic congestion and risk to

pedestrians; traffic study on number of vehicles using other businesses and other institutions; affect upon Fletcher place and residents; Fire Department approval and like to know identity of person who did inspection

M.O'Neil, only sketch plan

JStevens not sworn in and will need to come in to other meetings and give public feedback and give applicants copy of statement.

S.Butani take into concern; board aware of 2nd application

M.O'Neil are aware

KLerner, both plans can stand on its own; separate app for separate concepts; may take years to happen

JStevens, summarize in 2 sentences

S.Butani does not add to and takes away from Fletcher residents; apologizes for wrong format

JStevens next time can submit comments before Board

R.Tommy husband how is it possible that Turkovich can represent 3.6 acres of land to develop

S.Butani difficulty with Turkovich plans because every time different plan; deviation from existing structures, reduces lighting, institutional zone; may become an unofficial UVM dorm; one area should have been zoned RL but not acted upon by Planning

Commission; lots of pooling of water in area runoff, questions stability of ravine; article 5 cannot increase non conformity; cohousing is compatible in area; no open space should be looked at; other comments consistent with another level of review

B.Owre 43 Fletcher Place; husband lived in area for 43 yrs.; had had neighborhood and block party; welcome infill housing with neighborhood that is well designed and inhabited and grateful for meetings with developer and allowance for garden; major concerns with traffic, no access on Fletcher should be allowed; traffic lights won't resolve; concern about numbers in addition with noise and light pollution at all hours, hearing from Trinity campus from garbage; storm water runoff and erosion management;

JStevens why not come back to make comment

B.Owre when will that be; death in family and want to make final comments;

Unstable soils, green space

BRabinowitz typo lines don't have to show due to sketch plan

Brenda; flooding; bldg is too big for the scale and infrastructure; leave in shadow to north; bldg be a great wall in China and nothing says we should have 79 units; be according same concern for this neighborhood;

D.K., supportive of housing project; creative; looks forward to working with Turkovich and City

L.B., mentioned about the practice management for GYN, water runoff and access to traffic light; side of bldg has diagonal parking; detrimental to practice if no access to light; parking space is tight

M.O'Neil, Dr Clifford has had opportunity to work with developer

KLerner had not seen this plan and lot lines on trajectory that do not match;

G.Rabideau recognize they need to work out plans

G.Rabideau need more time with Board and want to work with Staff

JStevens asked if there was a limit on sketch plans

K.Lerner said no limits.

Public Hearing is closed and meeting is adjourned at 8:47pm

VII. Other Business

VII. Adjournment

Deliberation scheduled for Tuesday, April 28, 2015 at 5:00pm.

A.Hart – Chair, Development Review Board

Date

Anita Wade, Zoning Clerk

Date