Proposed Design for:

WOONSOCKET WATER DIVISION

New Garage and Offices
Roy Ave.
Woonsocket, RI, 02895
Bid # 6161

OWNER
CITY OF WOONSOCKET
169 Main ST.
Woonsocket RI, 02895

DATE: AUGUST 7TH, 2023

DRAWINGS

CIVIL
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C2: Existing Conditions Plan
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C4: Grading, Drainage & Utility Plan
C5: Utility Plan
C6: Soil Erosion and Sediment Control Plan
C7: Miscellaneous Details
C8: Miscellaneous Details
C9: Miscellaneous Details
C10: Miscellaneous Details
C11: Miscellaneous Details
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A3.0: Building Section
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A6.0: Details
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ELECTRICAL
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E0.2: Electrical Legends & Notes
E0.3: Electrical Legends & Notes
E0.4: Electrical Legends & Notes
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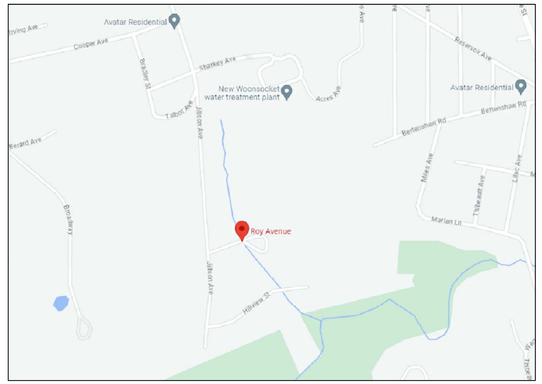
E1.0: Electrical Power & Signal Floor Plan
E1.1: Electrical Lighting Floor Plan
E1.2: Electrical Life Safety Floor Plan
E1.3: Electrical Mezzanine Floor Plan
E2.0: Electrical Riser
E2.1: Electrical Schedules & Details
E2.2: Electrical Schedules & Details



LOCUS MAP NTS

ARCHITECT
Ed Wojcik, Architect, Ltd.
One Richmond Square, Suite 100K
Providence, RI 02906
P: 401-861-7139

CIVIL ENGINEER
Crossman Engineering
151 Centerville Road
Warwick, RI 02886
P: 401-738-5660

STRUCTURAL ENGINEER
Yoder + Tidwell, Ltd.
56 Amaral Street
Riverside, RI 02915
P: 401-751-2460

M/E/P ENGINEER
Engineering Design Services, Inc.
141 Industrial Drive
North Smithfield, RI 02896
P: 401-765-7659

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

E N S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Cover

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

ISSUED FOR BIDDING

CVR

SITE PLAN SET

FOR

WOONSOCKET DPW WATER DIVISION FACILITY

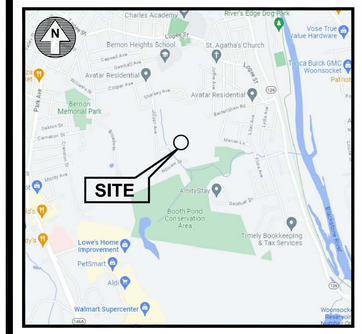
ASSESSOR'S MAP G4, LOT 31-5

ZONING DISTRICT: R-1

VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT

ROY AVENUE

WOONSOCKET, RHODE ISLAND



LOCATION MAP
NOT TO SCALE

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
8/2/23

INDEX OF DRAWINGS

REVISIONS

No.	DESCRIPTION	DATE
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OWNER

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI 02895

ENGINEERS

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

ARCHITECTS

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

AUGUST 7, 2023
(ISSUED FOR BIDDING)
SHEET 1 of 14

2747-C00-COVER-R3.dwg

GENERAL NOTES

1. ALL EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON BEST AVAILABLE INFORMATION AND REPRESENT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE RHODE ISLAND LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. A MINIMUM ADVANCE NOTICE OF 72 HOURS IS REQUIRED PRIOR TO START OF CONSTRUCTION.

2. SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I.D.O.T. STANDARD INSTALLATION, SPECIFICATIONS AND DETAILS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE BITUMINOUS PAVEMENT, CUTTING INTO CATCHBASIN/MANHOLES, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2018 EDITION, WITH LATEST REVISIONS UNLESS OTHERWISE SHOWN ON PLANS. THE "METHOD OF MEASUREMENT" AND "BASIS OF PAYMENT" ARE NOT APPLICABLE.

3. THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.

4. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS, SPECIFICATIONS OR PAYMENT ITEM DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE. THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.

5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.

6. ALL DISTURBED AREAS SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN OR OTHERWISE INSTRUCTED IN WRITING BY THE OWNER.

7. CONTRACTOR SHALL EXCAVATE TEST PITS TO CONFIRM UTILITY LOCATIONS/ELEVATIONS AT POTENTIAL CONFLICT POINTS (UTILITY/DRAIN CROSSINGS).

8. THE CONTRACTOR SHALL USE CARE WHEN WORKING NEAR UTILITY POLES AND WIRING SO AS TO NOT DISTURB ELECTRICAL/TELEPHONE/CABLE SERVICE TO THE CUSTOMERS. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THESE SERVICES AT ALL TIMES.

9. THE CONTRACTOR SHALL, AT NO ADDITIONAL EXPENSE, BRACE UTILITY POLES IF REQUIRED, AND REPAIR ANY DAMAGE TO EXISTING UTILITIES, SIDEWALKS, GUARDRAILS, CURBS, PAVING, SHRUBS, TREES, STONE WALLS, LAWNS, ETC.

10. CHANGE ORDERS MAY ONLY BE APPROVED FOR PAYMENT BY THE OWNER.

11. ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY SAFEGUARDED BY PROVIDING TEMPORARY BARRICADES, CAUTION SIGNS, LIGHTS AND OTHER MEANS TO PREVENT ACCIDENTS TO PERSONS AND DAMAGE TO PROPERTY. THE CONTRACTOR SHALL AT NO ADDITIONAL EXPENSE TO THE OWNER, PROVIDE SUITABLE AND SAFE CONDITIONS AT ALL AREAS OF THE WORK SITE AND SHALL PROVIDE SAFE VEHICULAR AND PEDESTRIAN ACCESS AROUND ALL WORK AREAS.

12. CONTRACTOR SHALL PROVIDE, AT NO ADDITIONAL EXPENSE, ADEQUATE EROSION CONTROL, FRAC TANKS OR SEDIMENTATION CONTROLS SUBJECT TO THE APPROVAL OF RIDEM FOR THE DISCHARGE OF ANY TRENCH DEWATERING.

13. ALL STRUCTURES AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE CITY OF WOONSOCKET DEPARTMENT OF PUBLIC WORKS. ALL EXCAVATION, BACKFILL AND RESTORATION WORK SHALL MEET THE CITY'S SPECIFICATIONS.

14. THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

15. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO REMOVAL AND/OR INSTALLATION OF UTILITIES ON SITE. THE COORDINATION IS NECESSARY FOR THE ENGINEER TO SCHEDULE SITE INSPECTIONS. INSTALLATIONS PERFORMED WITHOUT INSPECTIONS BY THE ENGINEER MAY WARRANT COMPLETE REMOVAL AND REINSTALLATION AT THE CONTRACTOR'S SOLE EXPENSE.

16. THE CONTRACTOR IS REQUIRED TO MAINTAIN DETAILED AS-BUILT INFORMATION FOR ALL UTILITY INSTALLATIONS. AS-BUILT INFORMATION MUST INCLUDE MATERIAL LIST, PIPE DEPTH AND SWING TIE LOCATIONS (2 MINIMUM) FROM NEW PIPE TO BUILDING CORNERS. ALL PIPE BEND/ELBOW LOCATIONS SHALL BE DIMENSIONED. FINAL PAYMENT WILL NOT BE MADE UNTIL SUITABLE AS-BUILT DATA IS PROVIDED.

17. AS-BUILT AUTOCAD FILES AND HARD COPY PLANS SHALL BE PROVIDED UPON COMPLETION OF WORK. CONTRACTOR IS RESPONSIBLE FOR THIS INFORMATION. FINAL PAYMENT TO CONTRACTOR SHALL NOT BE PROVIDED UNTIL ACCEPTABLE AUTOCAD FILES OF THE AS-BUILTS ARE SUBMITTED AND APPROVED BY THE OWNER.

FLOOD ZONE NOTE

THE PROPOSED SITE IS LOCATED WITHIN FLOOD ZONE X, AREAS TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN, ACCORDING TO FLOOD INSURANCE RATE MAP, PROVIDENCE COUNTY, RHODE ISLAND (ALL JURISDICTIONS), MAP NUMBER 44007C0157G, MAP REVISED MARCH 2, 2009.

STANDARD NOTES

1. ANY DAMAGE TO EXISTING PAVEMENT, BRIDGES, CULVERTS, CONDUIT, SIDEWALK, FENCES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

2. THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND MATERIAL AS FAR AWAY AS POSSIBLE FROM THE EDGE OF THE TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL POINTS ARE LOCATED AND CONSTRUCTION LAYOUT IS ESTABLISHED. THE CONSTRUCTION LAYOUT SHALL BE PROVIDED BY THE CONTRACTOR.

4. ASPHALT EMULSION TACK COAT SHALL BE PLACED PRIOR TO PAVEMENT PLACEMENT ON ANY NEW COURSE WHICH HAS BEEN OPEN TO TRAFFIC, OR ANY NEW COURSE WHICH HAS BEEN EXPOSED FOR MORE THAN 3 DAYS, AND/OR AS DIRECTED BY THE ENGINEER. IT SHALL ALSO BE APPLIED TO VERTICAL PAVEMENT FACES BETWEEN ADJOINING PAVEMENT SECTIONS.

5. THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND PLACING, AT HIS OWN EXPENSE, 2" MULCH IN AREAS WHICH ARE OUTSIDE OF THE PROJECT'S AREAS OF DISTURBANCE AND WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS INCLUDING THOSE AREAS WHERE VEHICLES, EQUIPMENT AND MATERIALS ARE STORED.

6. CLEANING AND SWEEPING OF PAVEMENT WILL INCLUDE REMOVAL OF ALL PAVEMENT DEBRIS PRIOR TO THE PLACEMENT OF EACH BITUMINOUS PAVEMENT LIFT. ALL CLEANING AND SWEEPING SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

8. NO FUEL STORAGE, VEHICLE REFUELING, OR EQUIPMENT STORAGE SHALL TAKE PLACE IN DESIGNATED WETLANDS, NOR WITHIN 100' OF ANY WATER BODY. THIS REQUIREMENT SHALL NOT SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAW, ORDINANCE, RULE OR REGULATION THAT APPLIES TO THE SAME, UNLESS THIS REQUIREMENT IS MORE STRINGENT THAN SAID LAW, ORDINANCE, RULE OR REGULATION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT AT THE END OF FINAL PAVING OPERATIONS, FLOW TO EXISTING DRAINAGE STRUCTURES HAS BEEN REESTABLISHED AND THAT NO ISOLATED DEPRESSIONS REMAIN. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS PROVISION; IT SHALL BE CONSIDERED INCIDENTAL TO PAVING OPERATIONS.

10. ALL EMBANKMENTS AND TRENCH BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 12" (AFTER COMPACTION) AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

1. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELIZING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.

2. ALL SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.

3. THE CONTRACTOR SHALL COVER ALL EXISTING AND/OR TEMPORARY SIGNS THAT ARE NOT RELEVANT TO THE TRAFFIC CONTROL REQUIRED DURING ANY PARTICULAR STAGE OF THE CONTRACT.

4. ADVANCE FLAGPERSON SIGNS SHALL BE USED IN ADVANCE OF ANY POINT AT WHICH A POLICE OFFICER HAS BEEN STATIONED TO CONTROL TRAFFIC. WHEN NEEDED, AN APPROPRIATE DISTANCE MESSAGE MAY BE DISPLAYED ON A SUPPLEMENTAL PLATE (24"x18") BELOW THE FLAGPERSON SYMBOL SIGN. THE SIGN SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE FLAGPERSON IS NOT AT THE STATION.

5. POLYETHYLENE DRUMS SHALL BE UTILIZED AS A CHANNELIZING DEVICE WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN BEYOND WORKING HOURS WHEN NO WORKERS ARE PRESENT. CONES SHALL BE UTILIZED WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN ONLY DURING WORKING HOURS AND IS SUBSEQUENTLY BROKEN DOWN AT THE END OF THE WORKDAY.

6. TEMPORARY CONSTRUCTION SIGNS AND OTHER WORKZONE TRAFFIC CONTROL DEVICES THAT ARE DAMAGED OR REQUIRE RELOCATION SHALL BE REPLACED AND / OR RELOCATED UNDER THE PAY ITEM FOR "MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION."

7. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED ON THE TRAVEL LANES OR SHOULDERS.

8. TEMPORARY CONSTRUCTION SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC, AND SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER APPROPRIATE.

9. THE INTENDED VEHICLE PATHS THROUGH EACH WORK ZONE SHALL BE CLEARLY MARKED AT ALL TIMES.

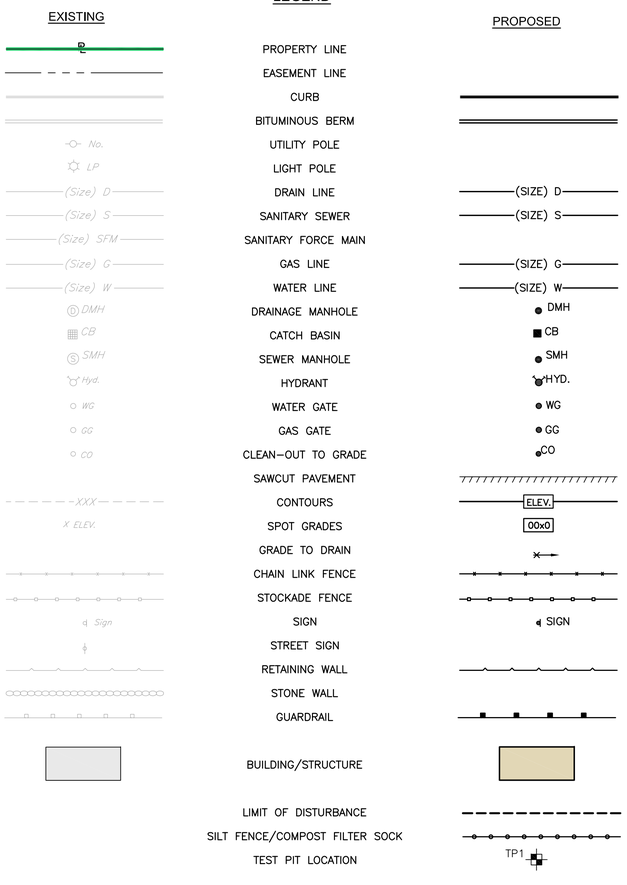
PROPOSED PAVEMENT STRUCTURE

2" HMA SURFACE COURSE, CL. 9.5
ASPHALT EMULSION TACK COAT
2" HMA BASE COURSE. CL. 12.5
12" GRAVEL BASE

PERMIT NOTE

THE PLAN SET IS SUBJECT TO REVIEW AND REVISIONS. THE RIDEM WETLANDS, STORMWATER, OWTS PERMIT APPLICATIONS ARE TENTATIVELY TO BE FILED AUGUST 2023.

LEGEND



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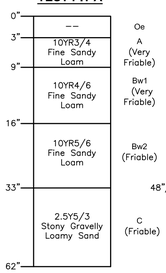

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SHWT Design Depth: 40"

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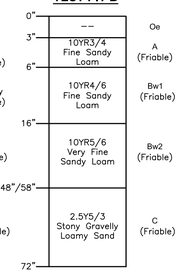

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GW Seepage Depth: N/A
SHWT Design Depth: 52"

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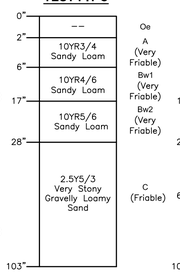

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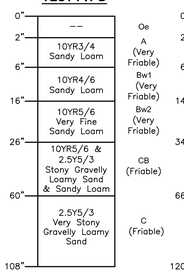

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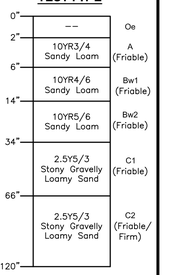
GW Seepage Depth: N/A
SHWT Design Depth: 55"

TEST PIT E

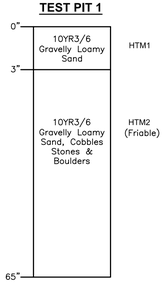


Soil Class: Ab Till
Limiting Layer: N/A
GW Seepage Depth: N/A
SHWT Design Depth: 66"

SOIL EVALUATION DATA

SOIL EVALUATIONS WERE CONDUCTED BY BRIAN KING ON MAY 11, 2023 AND JUNE 2, 2023

TEST PIT 1



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GW Seepage Depth: N/A
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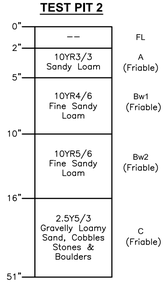

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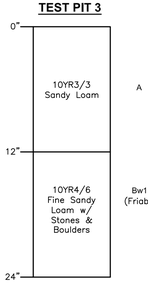

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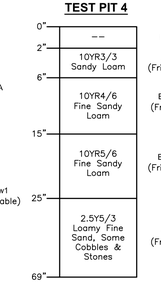

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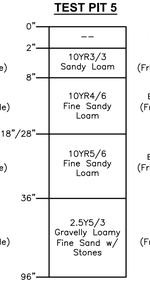

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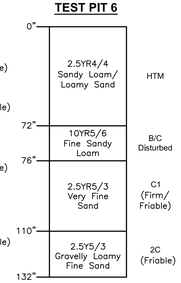

Soil Class: Ab Till
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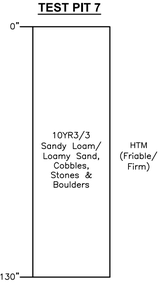

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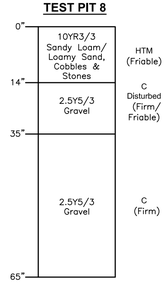

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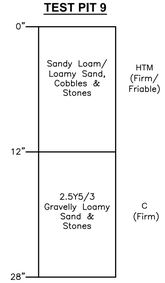

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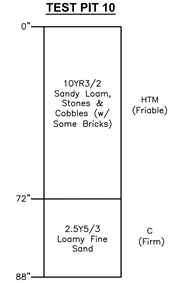

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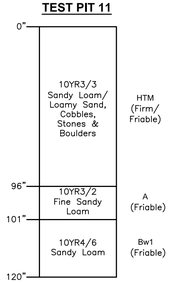
TEST PIT 11



Soil Class: HTM
Limiting Layer: 120"
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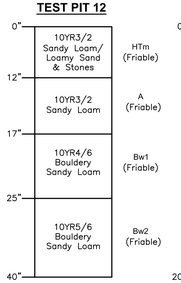
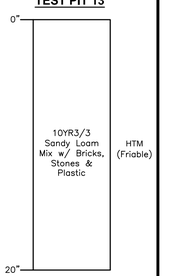
SHWT Design Depth: N/A

TEST PIT 12



Soil Class: HTM/Ab Till
Limiting Layer: 40"-52"
GW Seepage Depth: N/A
SHWT Design Depth: N/A

TEST PIT 13



Soil Class: Ab Till
Limiting Layer: 20"
GW Seepage Depth: N/A
SHWT Design Depth: N/A
Ledge @ 20"

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Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

GENERAL NOTES and LEGEND

DATE: AUGUST 7, 2023
SCALE: NO SCALE

DWG. NAME: 2747-C01-NOTE-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER

C1

SHEET: 2 *OF:* 14

PLAN NOTES:

1. BOUNDARY SURVEY PERFORMED BY INSITE ENGINEERING SERVICES, LLC.
2. TOPOGRAPHIC DATA PROVIDED BY THE CITY OF WOONSOCKET
3. THE SITE IS LOCATED IN ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS DESIGNATED ON THE NATIONAL FLOOD INSURANCE PROGRAM, FIRM FLOOD INSURANCE RATE MAP PROVIDENCE COUNTY, RHODE ISLAND (ALL JURISDICTIONS) PANEL 157 OF 451, MAP NUMBER 44007C0157G, EFFECTIVE DATE: MARCH 2, 2009.

NAD 83

MAP G4 LOT 31-16
N/F MATTHEW GUERRIERO
(BK 2664 PG 122)

MAP F4 LOT 31-24
N/F HOMESTEAD PROPERTY MANAGEMENT LLC.
(BK 2321 PG 5)

MAP G4 LOT 31-31
N/F ALBERT GAFNEY
(BK 1770 PG 314)

MAP G4 LOT 31-12
N/F H. ROBERT JR. & LYNNE C. ROY
(BK 1456 PG 388)

MAP G4 LOT 31-40
N/F PRD LLC.
(BK 2638 PG 151)

MAP G5 LOT 31-8
N/F HOMESTEAD PROPERTY MANAGEMENT LLC.
(BK 2321 PG 5)

ROY AVENUE
ACCESS EASEMENT (BK 2725 PG 279)

MAP G4 LOT 31-5
N/F CITY OF WOONSOCKET
(BK 2360 PG 262)

CAPPED REBAR SET

CAPPED IRON REBAR

Approx. Location Septic System

G4 LOT 31-66
2360 PG 270)

MAP G4 LOT 31-10
N/F ALBERT R. & HELEN GAGNON
(BK 2346 PG 130)

MAP G4 LOT 31-5
N/F CITY OF WOONSOCKET
(BK 2725 PG 275)
LOT AREA 339,586 SQ. FT. OR 7.79 ACRES

Garage

GBF

IRON PIPE FOUND

100' BUFFER ZONE

200' JURISDICTIONAL AREA

50' BUFFER ZONE

100' JURISDICTIONAL AREA

WLF 100
WLF 101
WLF 102
WLF 103
WLF 104
WLF 105

A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20 A21

GRAPHIC SCALE
20 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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Massachusetts
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North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6-27-24

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

EXISTING CONDITIONS PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=30'

DWG. NAME: 2747-C02-EXCN-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER

C2

SHEET: 3 *OF:* 14

DIMENSIONAL REGULATIONS
ZONING DISTRICT: VERY LOW DENSITY SINGLE-FAMILY (R-1)

USE
OFFICE (MUNICIPAL)

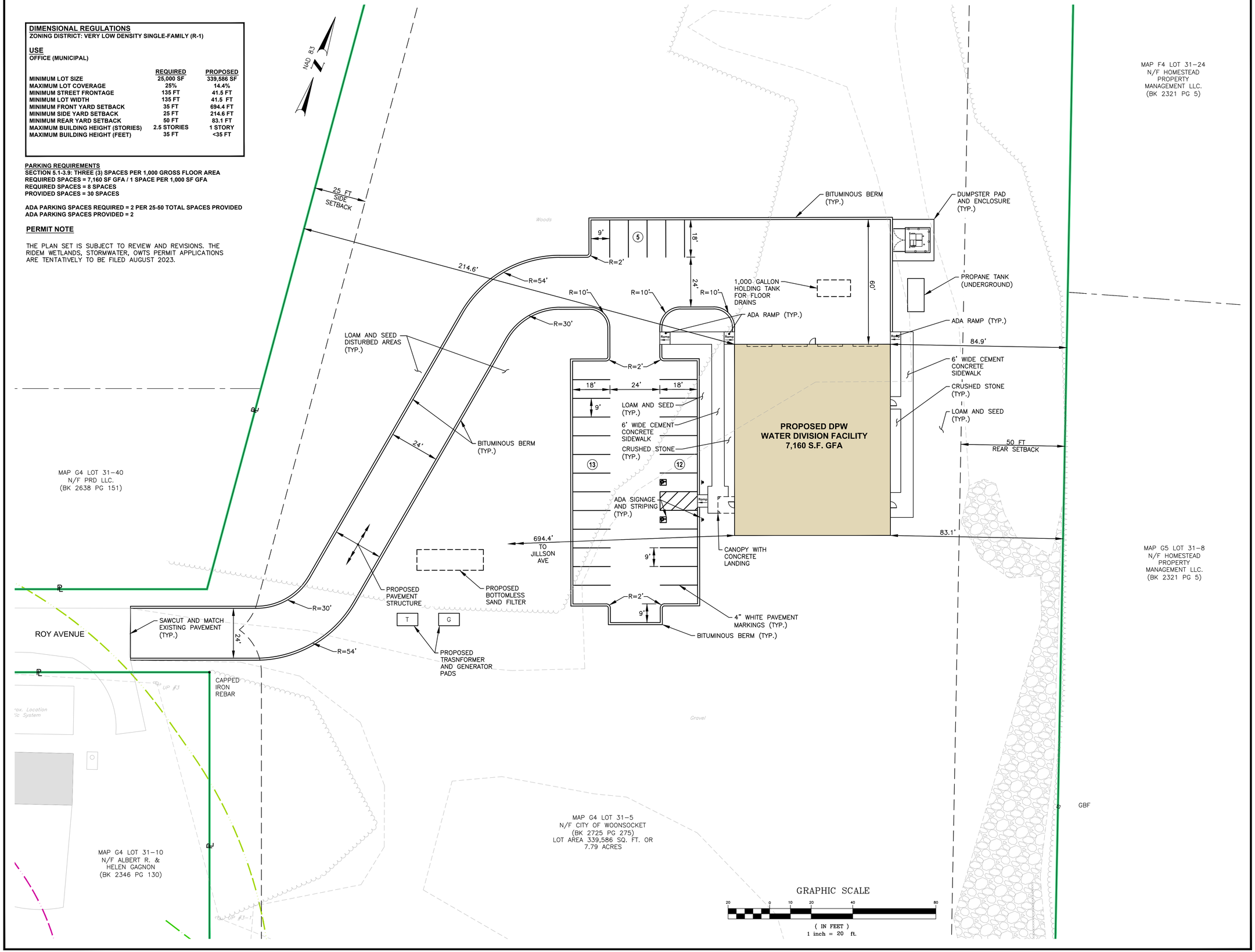
	REQUIRED	PROPOSED
MINIMUM LOT SIZE	25,000 SF	339,586 SF
MAXIMUM LOT COVERAGE	25%	14.4%
MINIMUM STREET FRONTAGE	135 FT	41.5 FT
MINIMUM LOT WIDTH	135 FT	41.5 FT
MINIMUM FRONT YARD SETBACK	35 FT	694.4 FT
MINIMUM SIDE YARD SETBACK	25 FT	214.6 FT
MINIMUM REAR YARD SETBACK	50 FT	83.1 FT
MAXIMUM BUILDING HEIGHT (STORIES)	2.5 STORIES	1 STORY
MAXIMUM BUILDING HEIGHT (FEET)	35 FT	<35 FT

PARKING REQUIREMENTS
SECTION 5.1-3.9: THREE (3) SPACES PER 1,000 GROSS FLOOR AREA
REQUIRED SPACES = 7,160 SF GFA / 1 SPACE PER 1,000 SF GFA
REQUIRED SPACES = 8 SPACES
PROVIDED SPACES = 30 SPACES

ADA PARKING SPACES REQUIRED = 2 PER 25-50 TOTAL SPACES PROVIDED
ADA PARKING SPACES PROVIDED = 2

PERMIT NOTE

THE PLAN SET IS SUBJECT TO REVIEW AND REVISIONS. THE RIDEM WETLANDS, STORMWATER, OWTS PERMIT APPLICATIONS ARE TENTATIVELY TO BE FILED AUGUST 2023.



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Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6.2.23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

SITE LAYOUT PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=20'
DWG. NAME: 2747-C03-SITE-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
--	--	--

DRAWING NUMBER

C3

SHEET: 4 *OF:* 14

DRAINAGE STRUCTURE TABLE

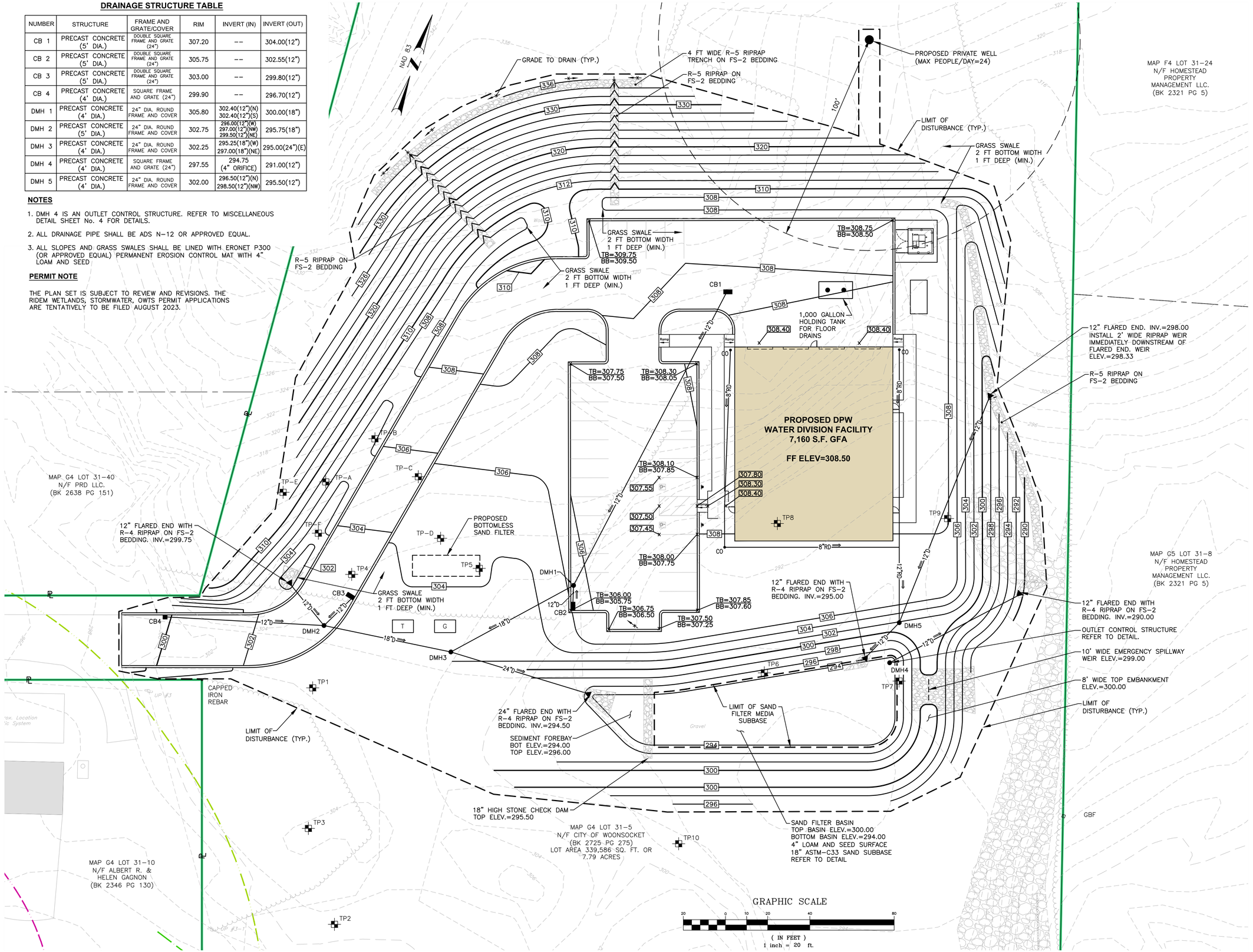
NUMBER	STRUCTURE	FRAME AND GRATE/COVER	RIM	INVERT (IN)	INVERT (OUT)
CB 1	PRECAST CONCRETE (5' DIA.)	DOUBLE SQUARE FRAME AND GRATE (24")	307.20	--	304.00(12")
CB 2	PRECAST CONCRETE (5' DIA.)	DOUBLE SQUARE FRAME AND GRATE (24")	305.75	--	302.55(12")
CB 3	PRECAST CONCRETE (5' DIA.)	DOUBLE SQUARE FRAME AND GRATE (24")	303.00	--	299.80(12")
CB 4	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	299.90	--	296.70(12")
DMH 1	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	305.80	302.40(12")(N) 302.40(12")(S)	300.00(18")
DMH 2	PRECAST CONCRETE (5' DIA.)	24" DIA. ROUND FRAME AND COVER	302.75	296.00(12")(W) 297.00(12")(NW) 299.50(12")(NE)	295.75(18")
DMH 3	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	302.25	295.25(18")(W) 297.00(18")(NE)	295.00(24")(E)
DMH 4	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	297.55	294.75 (4" ORIFICE)	291.00(12")
DMH 5	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	302.00	296.50(12")(N) 298.50(12")(NW)	295.50(12")

NOTES

1. DMH 4 IS AN OUTLET CONTROL STRUCTURE. REFER TO MISCELLANEOUS DETAIL SHEET No. 4 FOR DETAILS.
2. ALL DRAINAGE PIPE SHALL BE ADS N-12 OR APPROVED EQUAL.
3. ALL SLOPES AND GRASS SWALES SHALL BE LINED WITH ERONET P300 (OR APPROVED EQUAL) PERMANENT EROSION CONTROL MAT WITH 4" LOAM AND SEED

PERMIT NOTE

THE PLAN SET IS SUBJECT TO REVIEW AND REVISIONS. THE RIDEM WETLANDS, STORMWATER, OWTS PERMIT APPLICATIONS ARE TENTATIVELY TO BE FILED AUGUST 2023.



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Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6-7-23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

GRADING and DRAINAGE PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=20'

DWG. NAME: 2747-C04-GRADE-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER

C4

SHEET: 5 *OF:* 14

UTILITY NOTES

1. PRIOR TO ANY UTILITY CONSTRUCTION, THE CONTRACTOR MUST PERFORM ADDITIONAL TESTS TO:

   A. CONFIRM THE EXISTING DEPTHS OF UTILITIES AT ALL PROPOSED CONNECTION POINTS AND POTENTIAL CROSSOVER (CONFLICT) POINTS.

   B. CONFIRM THE EXTENT OF LEDGE WHICH MAY EXIST IN ALL ANTICIPATED UTILITY TRENCH AREAS. PRIOR TO CONSTRUCTION, THE FINDINGS ARE TO BE REVIEWED BY THE OWNER AND THE ENGINEER. IF NECESSARY, ALTERNATIVES TO MINIMIZE LEDGE OVAL AND UTILITY CONFLICTS WILL BE DEVELOPED. NO CONSTRUCTION WILL BE ALLOWED WITHOUT THE OWNERS AUTHORIZATION.

2. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. NO EXTRA PAYMENT TO THE CONTRACTOR DUE TO RELOCATIONS WILL BE AUTHORIZED.

3. THE UTILITY PLAN DOES NOT DEPICT THE NECESSARY ELECTRICAL CONDUIT/WIRING TO SERVICE THE PROPOSED LIGHTING, WHICH WILL BE INSTALLED BY THE CONTRACTOR FOR NO ADDITIONAL COST.

4. THE UTILITY PLAN DOES NOT REPRESENT THE SITE ELECTRIC/TELEPHONE/ COMMUNICATION SYSTEM DESIGNS.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL BY ENGINEER PRIOR TO ORDERING ANY MATERIAL.

6. DAMAGE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL REQUIRE FULL REPAIR OR REPLACEMENT OF DAMAGED UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

7. CONTRACTOR SHALL COORDINATE GAS AND ELECTRIC INSTALLATION WITH UTILITY COMPANIES. CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, TRENCHING, BACKFILLING AND COMPACTION FOR SERVICE INSTALLATION.

8. ALL PIPES AND CONDUITS ADJACENT TO THE CULVERT SHALL BE SLEEVED. USE CASING SPACERS AND SLEEVE END CAPS AT ALL LOCATIONS.

SANITARY NOTES

1. CONTRACTOR SHALL CONFIRM FINAL SANITARY PLUMBING LOCATIONS AND INVERTS WITH ARCHITECT AND ENGINEER PRIOR TO CONSTRUCTION.

2. THE SEPTIC SYSTEM AND ALL COMPONENTS DEPICTED ON THE PLAN REPRESENT A CONCEPTUAL LAYOUT AND ARE NOT INTENDED FOR CONSTRUCTION. THE OWNER AND ENGINEER SHALL FURNISH FINAL OWTS DESIGN PLANS TO THE CONTRACTOR FOLLOWING LOCAL AND STATE PERMIT APPROVALS.

ELECTRIC AND TELECOMMUNICATION NOTE

1. THE PROPOSED ELECTRIC AN TELECOMMUNICATION SERVICE DESIGN SHALL BE PERFORMED BY OTHERS AND COORDINATED WITH THE CONTRACTOR AND ENGINEER PRIOR TO CONSTRUCTION

ORENCO SYSTEM NOTES

1. THE SYSTEM SHALL BE EQUIPPED WITH AN HOUR METER AND AUDIBLE & VISUAL ALARMS TO INDICATE POWER INTERRUPTION TO THE SYSTEM. THE INDICATORS SHALL BE MOUNTED ON A N.E.P.A. APPROVED CABINET ON A POST EXTERIOR TO THE BUILDING AT A LOCATION APPROVED BY OWNER AND ALARMS (AUDIBLE & VISUAL) SHALL BE LOCATED WITHIN THE HOUSE.

2. A PUBLIC OR PRIVATE ENTITY SHALL BE RETAINED CONTINUOUSLY FOR THE LIFE OF THE SYSTEM AND BE AVAILABLE TO PERFORM NEEDED MAINTENANCE AND REPAIRS. SUCH ENTITY SHALL PERFORM AN INSPECTION OF THE SYSTEM AT LEAST TWICE ANNUALLY. THE ENTITY MUST BE APPROVED BY R.I.D.E.M. AND ADHERE TO ALL R.I.D.E.M. RECOMMENDED REPORTING REQUIREMENTS.

3. ABILITY TO CONNECT TO STANDBY POWER SUPPLY IS RECOMMENDED.

4. THE SEPTIC TANK AND PUMP CHAMBERS SHALL BE WATER-TIGHT. CONCRETE ANTI-FLOTATION COLLARS SHALL BE REQUIRED DUE TO FLUCTUATING GROUNDWATER LEVELS. A MINIMUM 8" LAYER OF GRAVEL SHALL BE SET LEVEL TO FORM A STABLE BASE.

5. A HIGH LEVEL WATER ALARM (VISUAL and AUDIBLE) POWERED BY A CIRCUIT SEPARATE FROM THE PUMP SHALL BE LOCATED IN THE HOUSE.

6. ALL PLUMBING AND ELECTRICAL WORK AND MATERIALS SHALL CONFORM TO ALL STATE, FEDERAL AND LOCAL CODES.

7. ALL PROCEDURES AND MATERIALS MUST ALSO CONFORM TO THE RECOMMENDATIONS AND REQUIREMENTS OF ORENCO SYSTEMS INCORPORATED AND ATLANTIC SOLUTIONS, LTD.

8. BOTTOMLESS SAND FILTER SHALL FOLLOW A TIMED DOSED ORENCO AX-20 ADVANCED TREATMENT SYSTEM.

9. THE CONTRACTOR AND SITE OWNER MUST BE FAMILIAR WITH AND MUST FULLY CONFORM TO THE R.I.D.E.M. "GUIDELINES FOR THE DESIGN AND USE AND MAINTENANCE OF PRESSURIZED DRAINFIELDS", NOVEMBER 2013 INCLUDING ADDENDA.

10. FILTER SAND MEDIA TO CONFORM TO ASTM 33 SAND WITH AN EFFECTIVE SIZE (D10) OF 0.3 mm AND UNIFORMITY COEF. (D60/D10) OF 3.0-4.0. MAXIMUM ALLOWABLE PERCENTAGE OF FINES PASSING NO. 200 SIEVE = 1% (ASTM D-136 AND ASTM C-117). TEST DATA SHALL BE PROVIDED TO DESIGNER PRIOR TO PURCHASE.

11. CONTROL PANEL PLACEMENT SHALL BE COORDINATED WITH THE OWNER.

12. ALL PUMP SYSTEMS, DISTRIBUTION SYSTEMS AND ADVANCED TREATMENT COMPONENTS SHALL BE MANUFACTURED BY ORENCO SYSTEMS, INC.

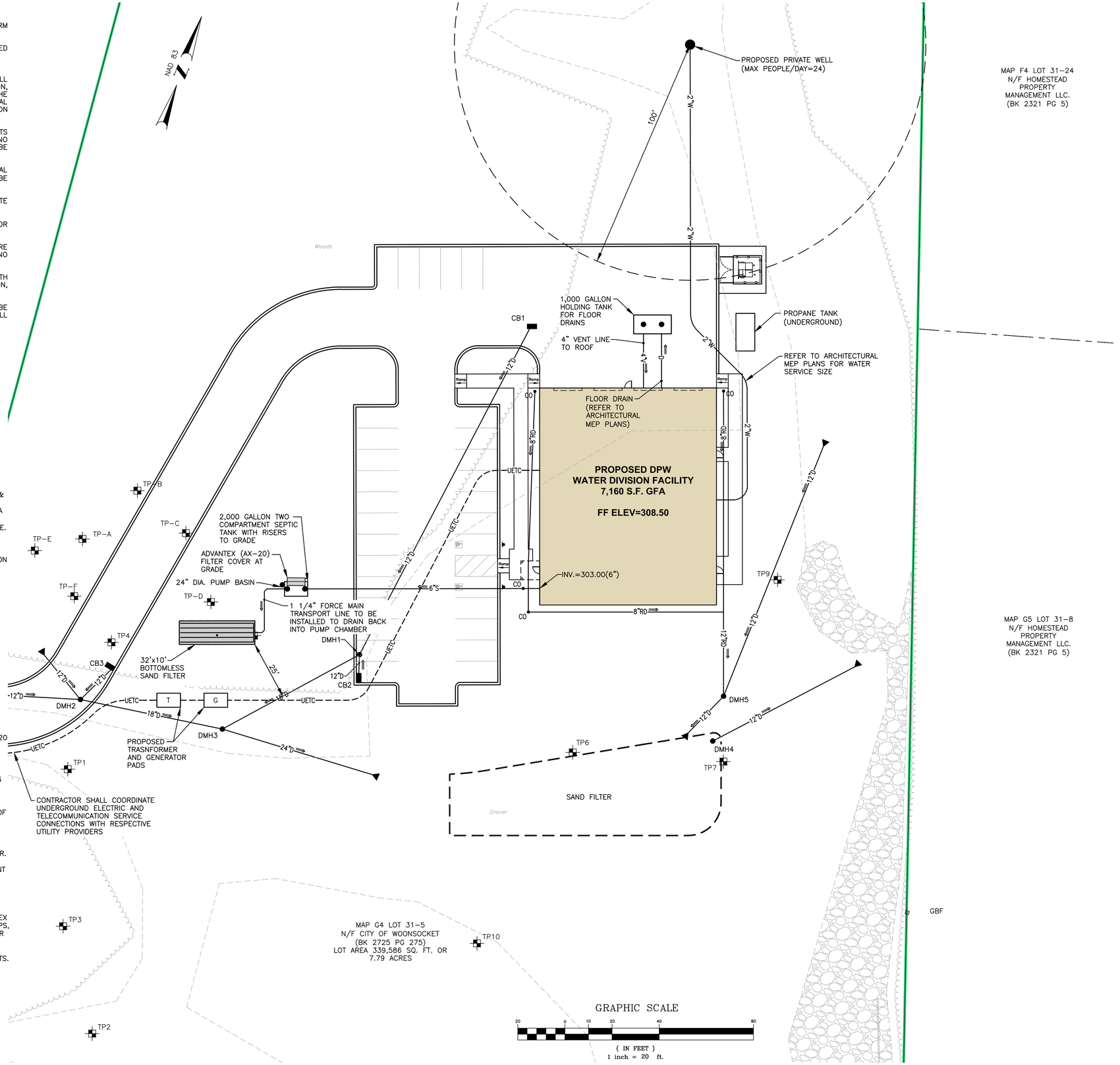
13. ALL PVC GRAVITY FLOW PIPING TO BE SOLID SCH. 35 OR SCH. 40 UNLESS OTHERWISE NOTED.

14. THE CONTRACTOR SHALL RETAIN THE SERVICES OF ORENCO – ADVANTEX TO INSTALL THE ADVANTEX SYSTEM INCLUDING THE TANKS, PIPING, PUMPS, WIRING AND CONTROL PANELS. CERTIFICATIONS FROM THE MANUFACTURER SHALL BE PROVIDED TO THE DESIGN ENGINEER THAT THE SYSTEM HAS BEEN INSTALLED CORRECTLY AND WILL OPERATE IN ACCORDANCE WITH RIDEM REGULATIONS AND THE MANUFACTURER'S OPERATION REQUIREMENTS.

15. TRAINING OF THE ORENCO – ADVANTEX COMPONENTS AND OPERATION REQUIREMENTS SHALL BE PROVIDED TO THE OWNER BY THE MANUFACTURER'S REPRESENTATIVE UPON INSTALLATION COMPLETION.

PERMIT NOTE

THE PLAN SET IS SUBJECT TO REVIEW AND REVISIONS. THE RIDEM WETLANDS, STORMWATER, OWTS PERMIT APPLICATIONS ARE TENTATIVELY TO BE FILED AUGUST 2023.



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Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED
PROFESSIONAL ENGINEER
6-27-23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

UTILITY PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=20'

DWG. NAME: 2747-C05-UTILITY-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER

C5

SHEET: 6 *OF:* 14

EROSION CONTROL AND SOIL STABILIZATION PROGRAM

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM, ADJACENT PROPERTY, AND ROADWAYS.
2. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR FIBER MULCH PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
3. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000–4,000 LBS/ACRE.
4. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY FILTER SOXX, STAKED HAY BALES OR SILT FENCING.
5. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW OR FIBER MATTING.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
7. ADDITIONAL HAY BALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER, MUNICIPAL REPRESENTATIVES OR LOCAL D.O.T.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST CONTROL AT NO ADDITIONAL COST TO THE OWNER.
9. ALL CATCH BASINS ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED BY SILT SACKS.
10. ALL PROPOSED CATCH BASINS SHALL BE PROTECTED BY STAKED HAY BALES, SILT FENCING OR SILT SACKS.
11. THE FILTREXX FILTER SOXX MAY BE INSTALLED ON THE EXISTING PAVEMENT /IMPERVIOUS AREAS WITH OUT STAKES. CONTRACTOR SHALL INSPECT DAILY, IF SOIL EROSION OR SEDIMENT IS OBSERVED IN THESE AREAS, THE CONTRACTOR SHALL RELOCATE OR INSTALL ADDITIONAL FILTREXX FILTER SOXX IN LOCATIONS THAT CAN BE STAKED. THIS WORK IS INCLUDED IN THE PROJECT SCOPE.
12. SILT FENCE OR STAKED HAYBALES MAY BE USED IN LIEU OF FILTREXX FILTER SOXX.
13. AN ALTERNATE COMPOST SOCK OR STRAW WATTLE PRODUCT MAY BE USED IN LIEU OF FILTREXX FILTER SOCK UPON APPROVAL OF THE ENGINEER.

INSPECTION/MAINTENANCE NOTES

1. PRIOR TO COMMENCING GRUBBING OPERATIONS AND EARTHWORK, FILTERSOXX SHALL BE PLACED INSIDE SAWCUT EDGE AND ALONG THE DOWNGRADIENT LIMIT OF DISTURBANCE TO PREVENT SEDIMENT FROM ENTERING EXISTING ROADWAY DRAINAGE SYSTEM, AND ABUTTING PROPERTIES AND THE CONTRACTOR SHALL INSTALL DRIPLINE TREE PROTECTION DEVICES ALONG THE PROPOSED TREELINE/EXISTING TREES TO REMAIN.
2. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM.
3. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSIVE TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION – SUCH AS RIP–RAP.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
6. ADDITIONAL FILTERSOXX OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
7. THE LATEST VERSION OF THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE R.I. STATE CONSERVATION COMMITTEE, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT–DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.

DUST CONTROL NOTES

ON AN AS–NEEDED BASIS OR AS DIRECTED BY THE CITY, RIDEM OR OWNER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS TO CONTROL DUST:

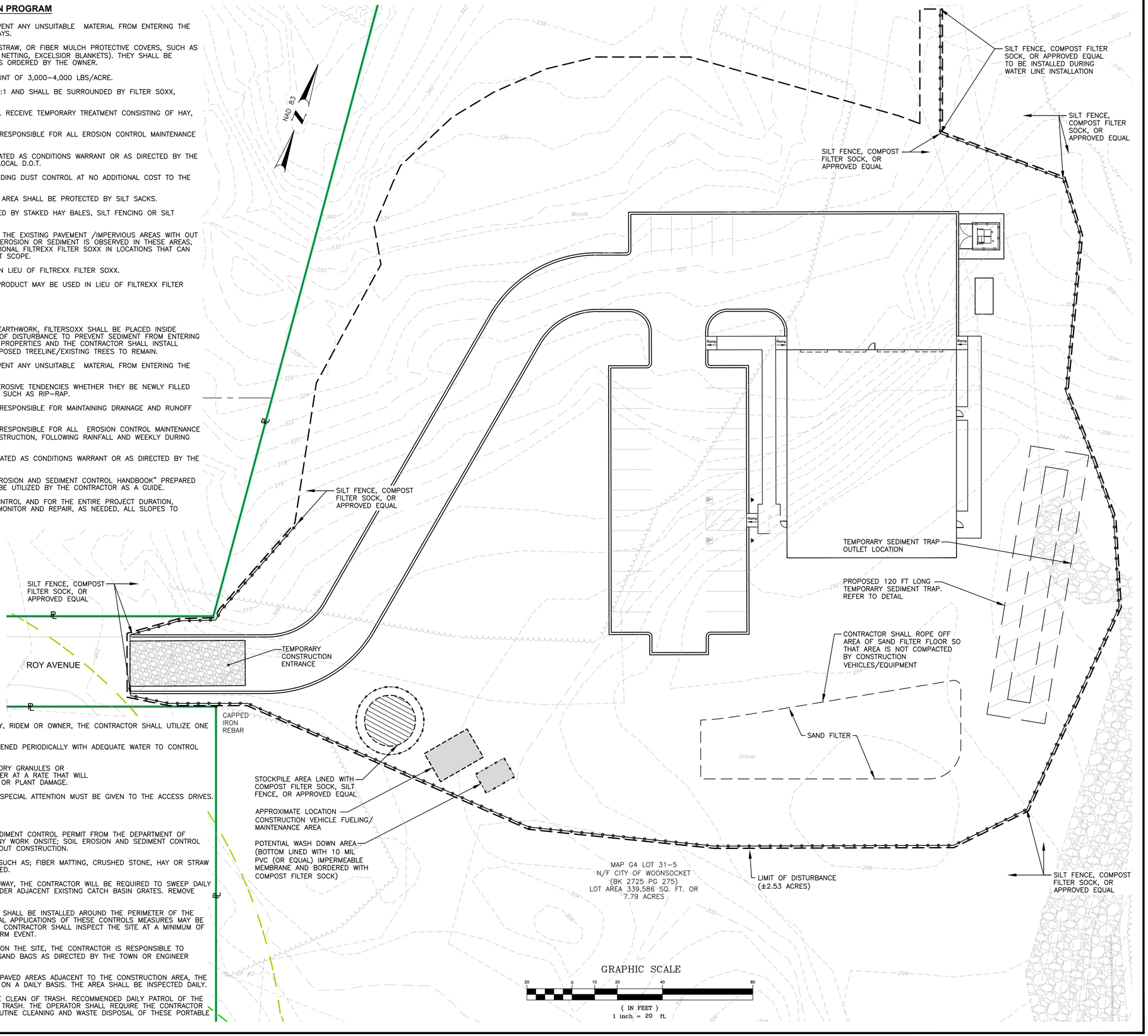
A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.

B. CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKE FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

GENERAL PROJECT WIDE NOTES

1. CONTRACTOR SHALL OBTAIN A SOIL EROSION AND SEDIMENT CONTROL PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF ANY WORK ONSITE; SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION.
2. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS; FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
3. IF SEDIMENT IS TRACKED OR ERODED INTO THE ROADWAY, THE CONTRACTOR WILL BE REQUIRED TO SWEEP DAILY AND TO INSTALL SILT SACK OR APPROVED EQUAL UNDER ADJACENT EXISTING CATCH BASIN GRATES. REMOVE AFTER CONSTRUCTION.
4. FILTER SOXX (OR SILT FENCE OR STAKED HAYBALES) SHALL BE INSTALLED AROUND THE PERIMETER OF THE AREA TO BE DISTURBED BY CONSTRUCTION. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
5. IF EROSION OR EROSIVE TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE TOWN OR ENGINEER DURING CONSTRUCTION.
6. IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING PAVED AREAS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
7. THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK–UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTINE CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.



- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
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- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6.2.23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

SOIL EROSION and SEDIMENT CONTROL PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=20'
DWG. NAME: 2747–C06–SOIL–R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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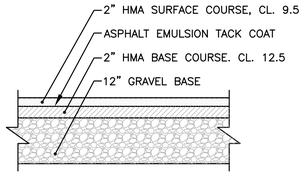
DRAWING NUMBER

C6

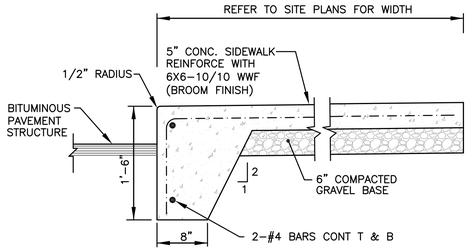
SHEET: 7 *OF:* 14



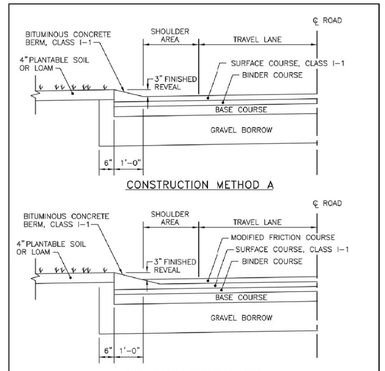
NOTES

1. THE ABOVE PAVEMENT THICKNESS REPRESENTS THE MINIMUM THICKNESS FOR ROADWAY, LOADING AREA AND DRIVE LANES.
2. PROPOSED BITUMINOUS PAVEMENT SHALL BE CLASS 12.5 OR CLASS 9.5 HMA

PROPOSED PAVEMENT STRUCTURE DETAIL
NOT TO SCALE



TYPICAL CONCRETE SIDEWALK WITH CAST-IN-PLACE CURB
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

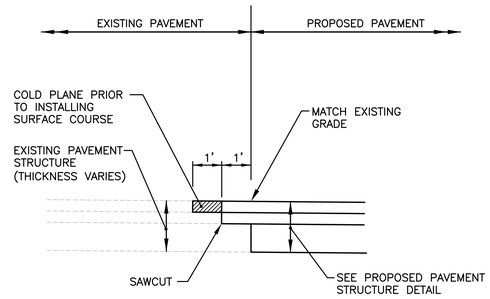
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BITUMINOUS BERM

R.I. STANDARD 7.5.1

REVISIONS		
NO.	BY	DATE
1	MJP	Mar. 05

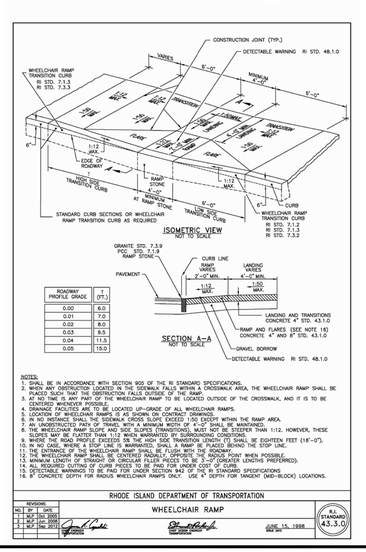
JUNE 15, 1998



NOTE

PROPOSED BITUMINOUS PAVEMENT SHALL BE HMA CLASS 12.5 OR CLASS 9.5.1

PROPOSED PAVEMENT MATCH AT EXISTING PAVEMENT
NOT TO SCALE



ROADWAY PROFILE GRADE	(FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.0
0.05	15.0

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP SHALL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME SHALL ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE LOCATED WITHIN THE LIMITS OF THE CROSSWALK.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. NO CHANGE IN GRADE OR CROSS SLOPE GREATER THAN 1:50 SHALL OCCUR WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'–0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT BE STEEPER THAN 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE CURB ROAD PROFILE EXCEEDS 5%, HIGH SIDE TRANSITION GRADE (1:12) SHALL BE EIGHTEEN FEET (18'–0").
10. IN NO CASE SHALL ANY PART OF THE WHEELCHAIR RAMP EXTEND BEYOND THE EXTENDED STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. THE WHEELCHAIR RAMP SHALL BE PERPENDICULAR TO THE CURB (RADIAL LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE FINE FOR UNDER COST OF CURB.
15. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 842 OF THE RI STANDARD SPECIFICATIONS.
16. 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID–BLOCK) LOCATIONS.

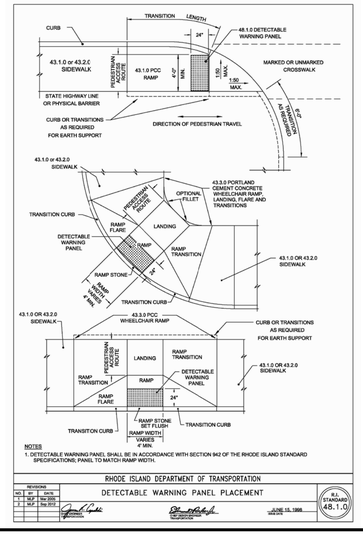
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

WHEELCHAIR RAMP

R.I. STANDARD 43.3.0

REVISIONS		
NO.	BY	DATE
1	MJP	Dec. 2000
2	MJP	Jan. 2006
3	MJP	Mar. 2012

JUNE 15, 1998



NOTES
1. DETECTABLE WARNING PANEL SHALL BE IN ACCORDANCE WITH SECTION 842 OF THE RHODE ISLAND STANDARD SPECIFICATIONS; PANEL TO MATCH RAMP WIDTH.

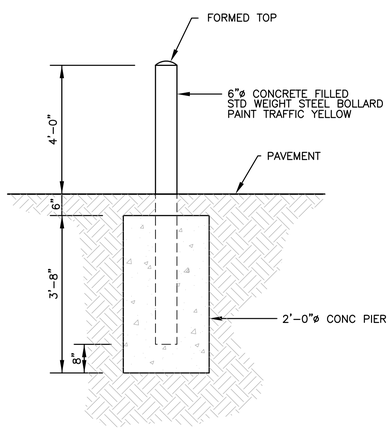
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DETECTABLE WARNING PANEL PLACEMENT

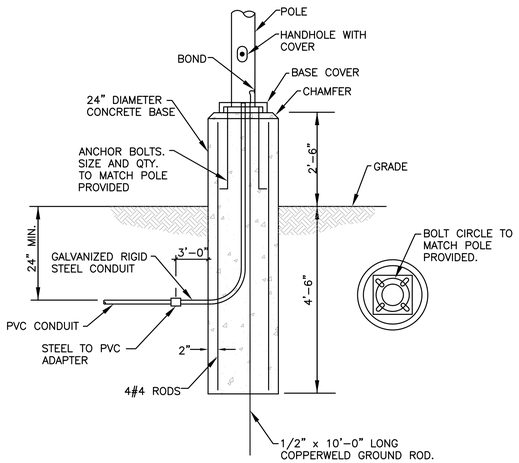
R.I. STANDARD 48.1.0

REVISIONS		
NO.	BY	DATE
1	MJP	Mar. 2000
2	MJP	Feb. 2012

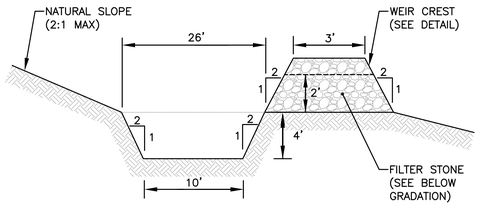
JUNE 15, 1998



TYPICAL BOLLARD DETAIL
NOT TO SCALE



TYPICAL POLE BASE DETAIL
NOT TO SCALE



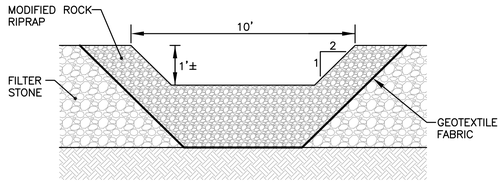
TEMPORARY SEDIMENT TRAP DETAIL
NOT TO SCALE

NOTE

FILTER STONE SHALL MEET THE REQUIREMENTS OF R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.09 TABLE 1, COLUMN V FILTER STONE.

US STANDARD SIEVE SIZE (INCHES)	FILTER STONE
1	100
3/4	70–85
1/2	10–40
3/8	0–20
#4	0–5

GRADATION OF FILTER STONE MATERIAL



TEMPORARY SEDIMENT TRAP OUTLET DETAIL
NOT TO SCALE

NOTES

1. THE TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO UNDISTURBED, STABILIZED GROUND.
2. CONTRACTOR SHALL INSTALL 1 OUTLET PER 100' LENGTH OF TEMPORARY SEDIMENT TRAP (1 OUTLET MIN. PER TEMPORARY SEDIMENT TRAP).
3. THE MODIFIED ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF THE R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.0.3.2.
4. CONTRACTOR MUST REFER TO THE INSTALLATION, INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS PROVIDED IN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, AS AMENDED.

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Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cel@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6/2/23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

MISCELLANEOUS DETAIL PLAN No. 1

DATE: AUGUST 7, 2023
SCALE: AS SHOWN

DWG. NAME: 2747–C07–DETAIL1–R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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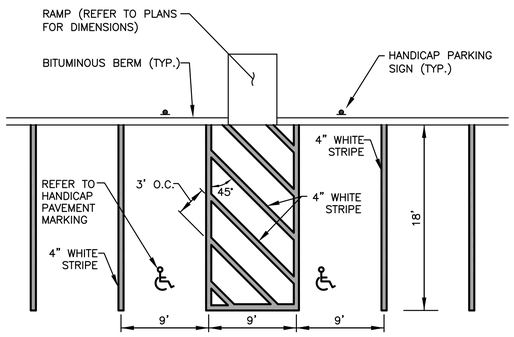
DRAWING NUMBER

C7

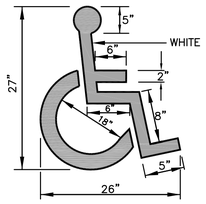
SHEET: 8 *OF:* 14



NOTE

ALL HANDICAP PARKING SPACES SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND ADA REQUIREMENTS.

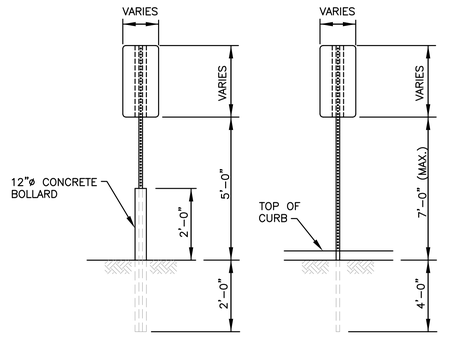
ADA PARKING STALLS
NOT TO SCALE



NOTE

ALL ADA PARKING SPACES SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND ADA REQUIREMENTS.

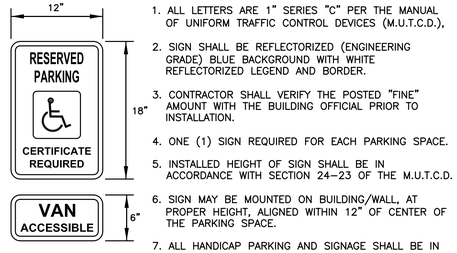
ADA PAVEMENT MARKING
NOT TO SCALE



(MOUNTING DETAIL FOR SIGNS WITH NO SIDEWALK)

(MOUNTING DETAIL FOR SIGNS BEHIND SIDEWALK)

SIGN MOUNTING DETAIL
NOT TO SCALE



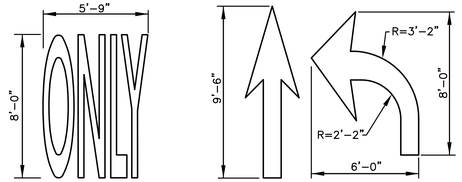
NOTE:

1. ALL LETTERS ARE 1" SERIES "C" PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.),
2. SIGN SHALL BE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. CONTRACTOR SHALL VERIFY THE POSTED "FINE" AMOUNT WITH THE BUILDING OFFICIAL PRIOR TO INSTALLATION.
4. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
5. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE M.U.T.C.D.
6. SIGN MAY BE MOUNTED ON BUILDING/WALL, AT PROPER HEIGHT, ALIGNED WITHIN 12" OF CENTER OF THE PARKING SPACE.
7. ALL HANDICAP PARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE.

SIGN NOTES:

1. SIGN POSTS SHALL BE GALVINIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN.) AND INSTALLED IN CONFORMANCE WITH MUTCD AND LOCAL STANDARDS AND SPECIFICATIONS.
2. POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN.)
3. THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
4. WITHIN SIDEWALK LOCATIONS THE SIGN POST WILL BE INSTALLED WITHIN A 8"x8"x6" SQUARE BOX FORM.

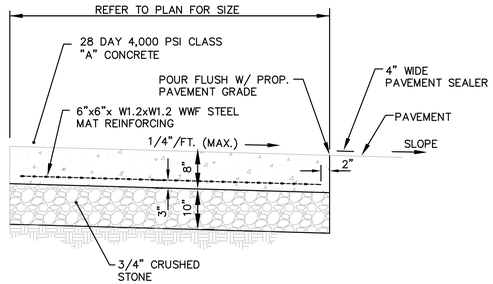
PROPOSED ADA PARKING SIGNS
NOT TO SCALE



NOTES

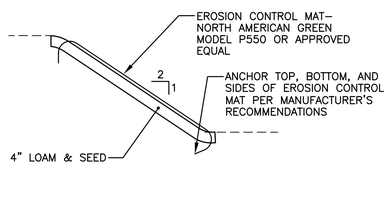
1. THE LONGITUDINAL SPACE BETWEEN LINES OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS.
2. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD.
3. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS.

PAVEMENT MARKING DETAIL
NOT TO SCALE

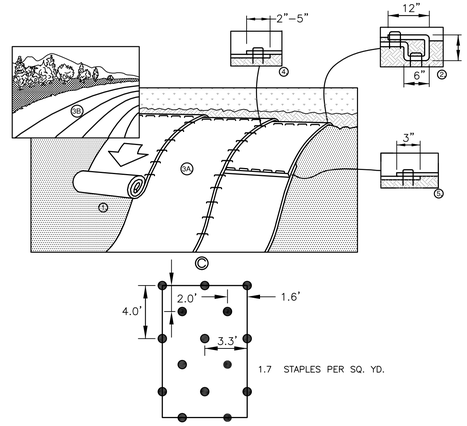


SECTION VIEW

DUMPSTER ENCLOSURE PAD DETAIL
NOT TO SCALE



2:1 GRASS SLOPE TYPICAL SECTION
NOT TO SCALE

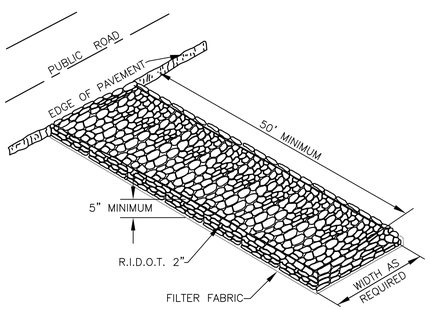


NOTE:

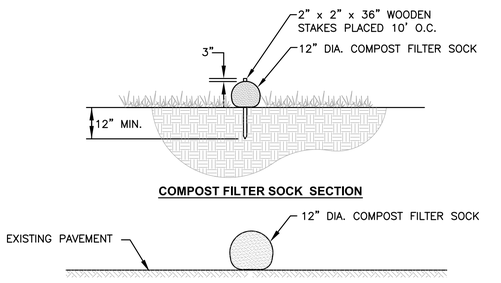
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
6. ALL REQUIRED EROSION CONTROL BLANKET (MAT) OVERLAPS AND ANCHORS SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.

NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION CONTROL BLANKET (MAT)
PERMANENT AND TEMPORARY INSTALLATION DETAIL
NOT TO SCALE



CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

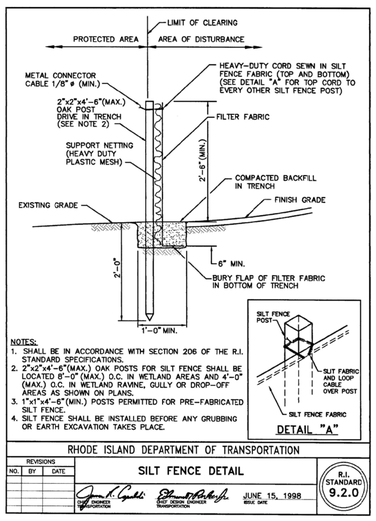


COMPOST FILTER SOCK SECTION

COMPOST FILTER SOCK PAVEMENT OPTION

NOTE: SILT FENCE (RI STD. 9.2.0) MAY BE USED IN LIEU OF COMPOST FILTER SOCK.

COMPOST FILTER SOCK DETAIL
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

SILT FENCE DETAIL

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 9.2.0

- Civil
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- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6/2/23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

MISCELLANEOUS DETAIL PLAN No. 2

DATE: AUGUST 7, 2023
SCALE: AS SHOWN
DWG. NAME: 2747-C08-DETAIL2-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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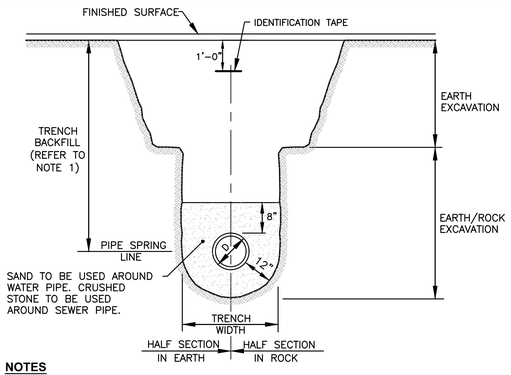
DRAWING NUMBER

C8

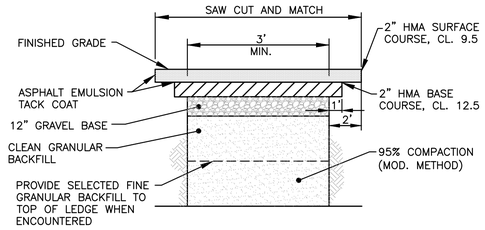
SHEET: 9 *OF:* 14



NOTES

1. BEDDING/BACKFILL TO BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR METHOD.
2. ALL TRENCH EXCAVATION AND ANY SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND OSHA REGULATIONS.
3. MINIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 12". MAXIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 24".

TRENCH DETAIL
NOT TO SCALE

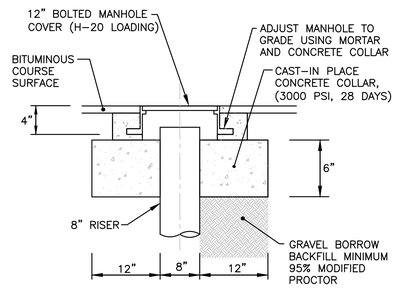


NOTE

THE PAVEMENT DEPTH IN TRENCH AREAS FOR PROPOSED UTILITY PIPE AND CONNECTIONS WITHIN ROADWAY SHALL BE REPLACED IN-KIND. BASE COURSE SHALL BE PLACED IN 2" LIFTS. THE CONTRACTOR SHALL COORDINATE ALL PAVING OPERATIONS WITHIN THE ROADWAY WITH THE ENGINEER PRIOR TO PLACEMENT.

TYPICAL TRENCH PATCH DETAIL
NOT TO SCALE

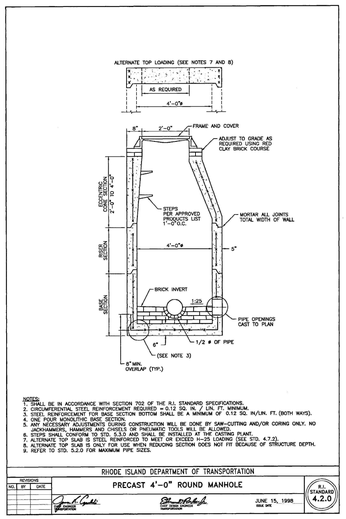
TRENCH WIDTH Ws OR Wu		
DIAMETER OF PIPE D	Wu UNSHEETED	Ws SHEETED
12" AND SMALLER	3'-4"	4'-6"
15"	3'-6"	4'-8"
18"	3'-10"	5'-0"
21"	4'-2"	5'-4"
24"	4'-6"	5'-8"
27"	4'-10"	6'-0"
30"	5'-6"	6'-8"
36"	6'-2"	7'-4"
42"	6'-10"	8'-0"
48"	7'-6"	8'-8"



NOTE

CONCRETE COLLAR IS NOT REQUIRED IN LANDSCAPE AREAS.

ROOF DRAIN CLEAN-OUT DETAIL IN PAVEMENT
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. STEEL REINFORCEMENT: TOTAL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN/LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ALL CONCRETE SURFACES EXPOSED DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
8. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

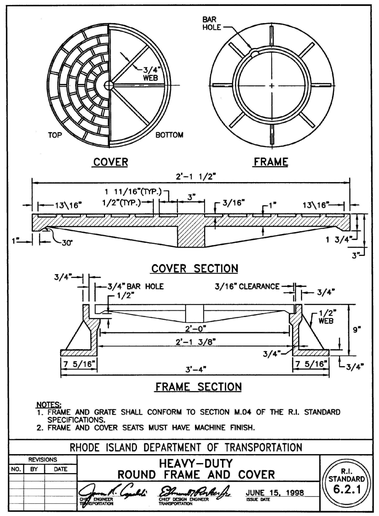
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 4'-0" ROUND MANHOLE

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.2.0



NOTES:
1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

HEAVY-DUTY ROUND FRAME AND COVER

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 6.2.1

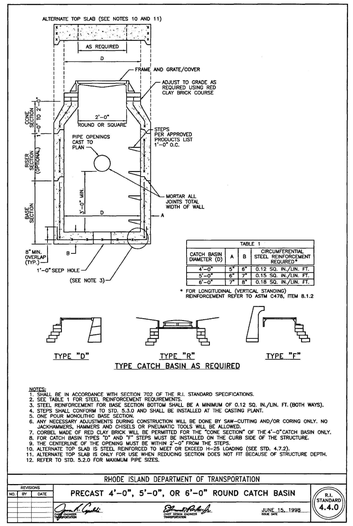


TABLE 1

CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	9"	9"	0.12 SQ. IN./LIN. FT.
5'-0"	9"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

* FOR LONGITUDINAL (VERTICAL STACKING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ALL CONCRETE SURFACES EXPOSED DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORING, MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0"CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. REFER TO STD. 8.1.0 FOR TYPE OF FRAME AND GRATE OR COVER TO BE USED.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED WITH NET AREA OF STEEL NOT EXCEED 14-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

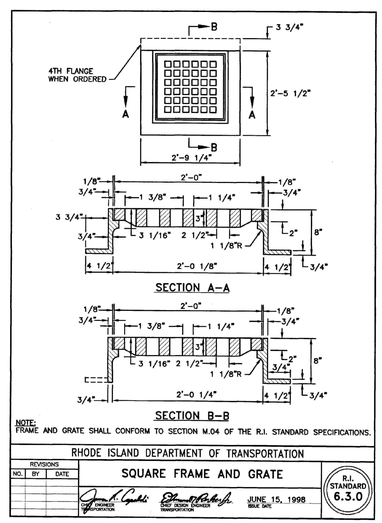
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.4.0



NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

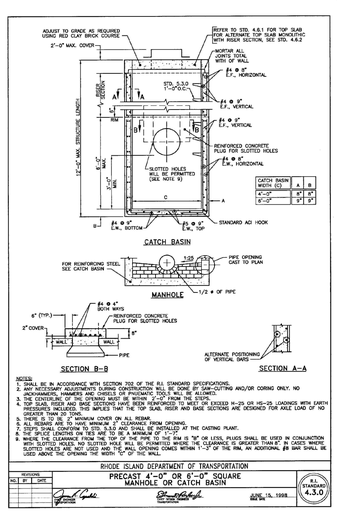
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

SQUARE FRAME AND GRATE

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 6.3.0



CATCH BASIN WIDTH (D)	A	B
4'-0"	8"	8"
6'-0"	9"	9"

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL CONCRETE SURFACES EXPOSED DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 1'-0" OF THE CENTER OF THE STEP.
4. FOR CATCH BASIN TYPES "D" AND "F" WHERE THE DEPTH OF THE STRUCTURE EXCEED H-25 OR HS-25 LOADING WITH EARTH SURCHARGES INCLUDED, THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
5. THERE SHALL BE A MINIMUM COVER ON ALL REBAR.
6. ALL REBARS ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.
7. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
8. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
9. WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE #4@ IS TOP OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 6". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-0" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "D" OF THIS WALL.

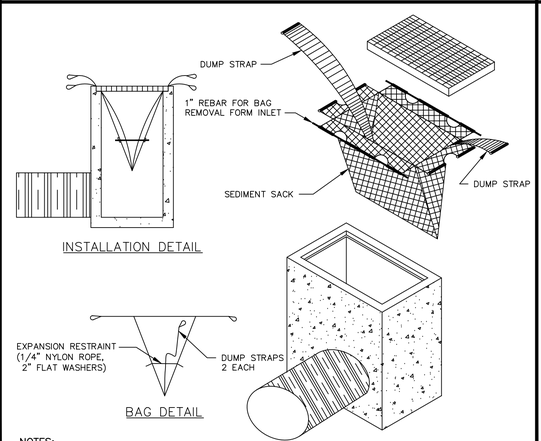
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN

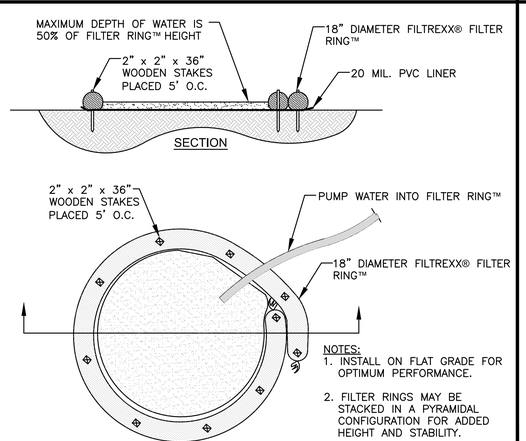
JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.3.0



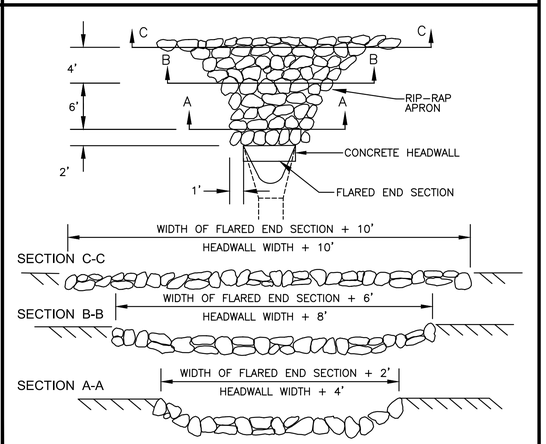
NOTES:
1. INSTALL SILT SACK AT CATCH BASINS IN VICINITY OF CONSTRUCTION.
2. CONTRACTOR SHALL SUBMIT SILT SACK SHOP DRAWING TO ENGINEER FOR APPROVAL.
3. A FLEX STORM INLET FILTER, AS MANUFACTURED BY ADS PIPE, MAY BE USED IN LIEU OF A SILT SACK. APPROVAL FROM THE ENGINEER IS REQUIRED.

TYPICAL SILT SACK DETAIL
NOT TO SCALE



FILTREXX® FILTER RING
NOT TO SCALE

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. FILTER RINGS MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.
3. FILTER RINGS MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
4. THIS TYPICAL INSTALLATION SHALL BE USED FOR DEWATERING OPERATIONS.



NOTE: STONE SIZE SHALL BE R-4 RIPRAP WITH FS-2 BEDDING.

TYPICAL LAYOUT OF RIP-RAP OUTLET PROTECTION AT FLARED END SECTIONS and CONCRETE HEADWALLS
NOT TO SCALE

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6-27-23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

MISCELLANEOUS DETAIL PLAN No. 3

DATE: AUGUST 7, 2023
SCALE: AS SHOWN
DWG. NAME: 2747-C09-DETAIL3-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER

C9

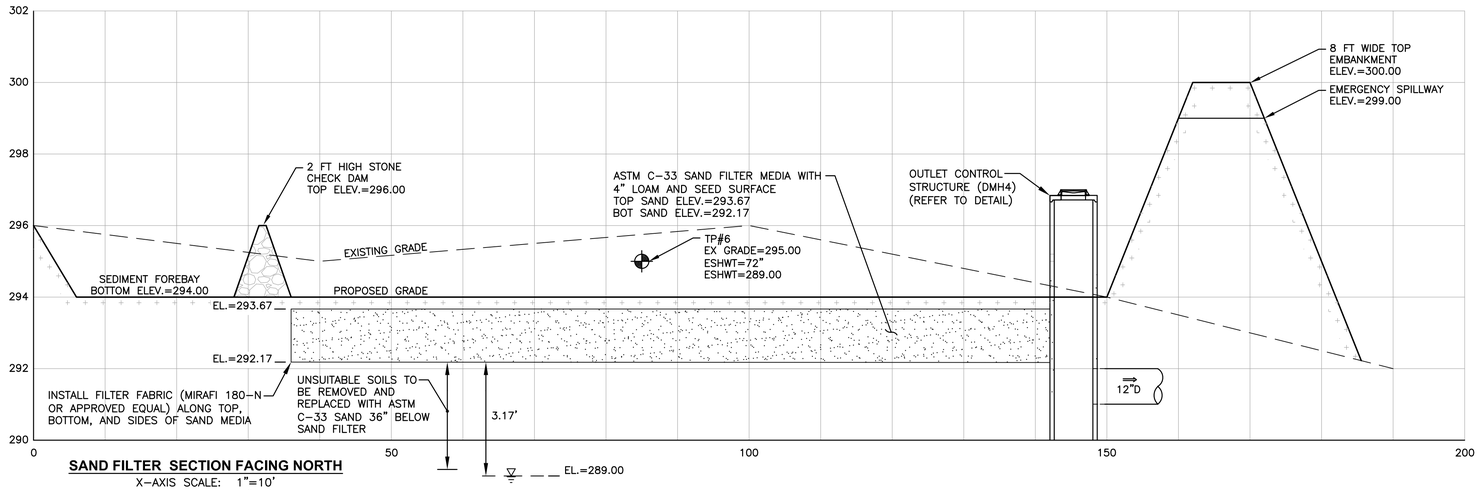
SHEET: 10 *OF:* 14

DRAINAGE NOTES

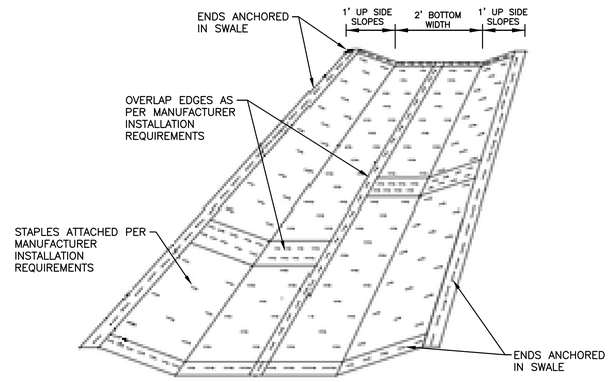
1. CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
2. CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
3. ALL STRUCTURES SHALL BE DESIGNED FOR H–20 LOADING.
4. ALL CATCH BASINS SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES. (NO WEEP HOLES).
5. UNLESS OTHERWISE NOTED, ALL SOLID DRAINAGE PIPE SHALL BE ADS N–12 HDPE OR APPROVED EQUAL. PIPE BEDDING SHALL BE IN CRUSHED STONE OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD). ADS PIPE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS. PIPES SHALL BE INSTALLED WITH CLAY TRENCH DAMS EVERY 50' (MINIMUM 1 PER PIPE).
6. GRADES WITHIN HANDICAP ACCESSIBLE PARKING SPACES AND AISLES SHALL NOT BE LESS THAN 1% OR GREATER THAN 2%.
7. ALL ROOF DRAINS SHALL BE INSTALLED AT A 1.0% MINIMUM SLOPE.
8. CONTRACTOR MAY NEED TO RELOCATE PIPE TO AVOID CONFLICTS WITH EXISTING UTILITIES. COORDINATE RELOCATION WITH ENGINEER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR DAMAGE TO EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE TO INCLUDE ALL WORK NECESSARY TO INSTALL THIS PIPE, INCLUDING TRANSPLANTING OR PLANTING NEW TREES IF NECESSARY.

SAND FILTER CONSTRUCTION NOTE

1. THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND SUBSOIL AREAS (A AND B HORIZONS), HTM/FILL, AND ANY EXISTING SOILS THAT YIELD A PERMEABILITY RATE <1.02 INCHES/HOUR WITHIN 36" OF THE BOTTOM OF THE SAND FILTER. CONTRACTOR SHALL COORDINATE A BOTTOM BED INSPECTION WITH OWNER AND ENGINEER. IF NECESSARY THE AREA SHALL BE PREPARED WITH SAND FILL SOIL MEETING THE MEDIA REQUIREMENTS OF SAND FILTERS, AS DESCRIBED IN THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, LATEST EDITION. THE DEPTH OF EXISTING SOIL REMOVAL SHALL BE VERIFIED BY THE ENGINEER. PLACEMENT OF THE SAND FILL (ASTM C–33 SAND), SHALL BE USED TO BRING THE BOTTOM OF BASIN TO THE DESIGN ELEVATIONS.
2. SAND FILTER CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, LATEST EDITION. AFTER CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE FINAL INSPECTIONS WITH THE OWNER.
3. THE CONTRACTOR IS REQUIRED TO SUBMIT A LIST OF MATERIALS, GRADATIONS AND THE NAME AND ADDRESS OF THE SUPPLIERS TO THE ENGINEER FOR APPROVAL PRIOR TO BRINGING MATERIAL ON SITE. MATERIAL CERTIFICATIONS SHALL ALSO BE REQUIRED FOR REVIEW AND APPROVAL.
4. THE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE ABOVE REFERENCED MANUAL. THE MANUAL CAN BE FOUND AT: http://www.dem.ri.gov/pubs/regs/regs/water/swmanual15.pdf
5. GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION; BY MARKING OFF THE UNDERGROUND INFILTRATION SYSTEM AND SAND FILTER LOCATIONS BEFORE THE START OF CONSTRUCTION, AND BY CONNECTING UPSTREAM DRAINAGE AREAS ONLY AFTER CONSTRUCTION IS COMPLETE AND THE CONTRIBUTING AREA IS STABILIZED.
6. IF LARGE ROCKS OR BOULDERS ARE FOUND WITHIN 36" BELOW THE INFILTRATION SYSTEMS, OR WITHIN A 10' PERIMETER AROUND SYSTEM, THE CONTRACTOR SHALL REMOVE THE ROCKS/BOULDERS AND REPLACE WILL GRAVEL BORROW. CONTRACTOR SHALL COORDINATE WITH ENGINEER.
6. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR THE PIPES TO BE USED IN THE UNDERGROUND INFILTRATION SYSTEM AND SAND FILTERS TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SHOP DRAWINGS MUST VERIFY THAT THE PIPES CAN SUPPORT H–20 LOADING WITH THE SYSTEM SPECIFIC COVER.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH A CULTEC REPRESENTATIVE FOR INSTALLATION SPECIFICATIONS AND PROCEDURES.



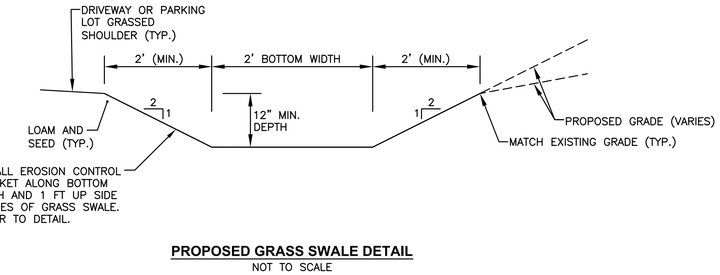
SAND FILTER SECTION FACING NORTH
X–AXIS SCALE: 1"=10'
Y–AXIS SCALE: 1"=2'



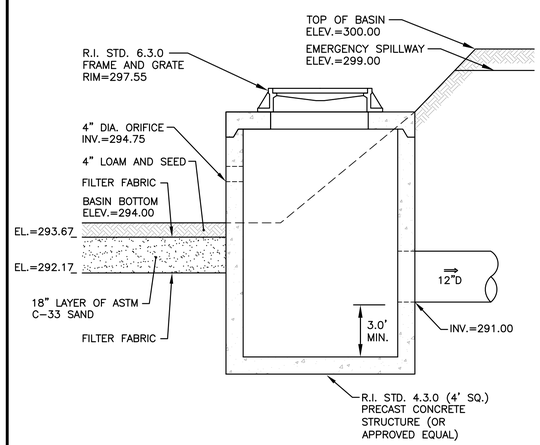
NOTE

1. EROSION MATTING SHALL BE ERONET P300 PERMANENT EROSION CONTROL BLANKET (OR APPROVED EQUIVALENT) AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. EROSION MATTING SHALL BE PLACED ALONG THE BOTTOM AND 12–INCHES UP THE SIDE SLOPES OF ALL SWALES AND INSTALLED IN ACCORDANCE TO MANUFACTURER SPECIFICATIONS.

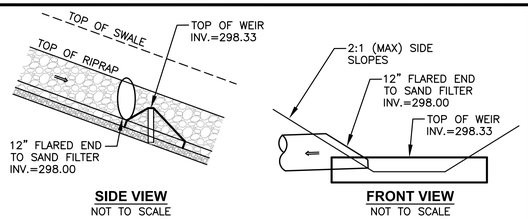
EROSION MATTING IN SWALE INSTALLATION DETAIL
NOT TO SCALE



PROPOSED GRASS SWALE DETAIL
NOT TO SCALE



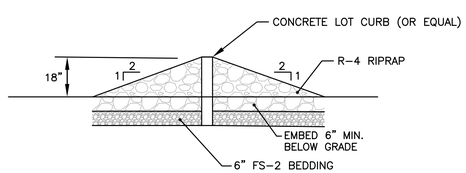
OUTLET CONTROL STRUCTURE (DMH 4) DETAIL
NOT TO SCALE



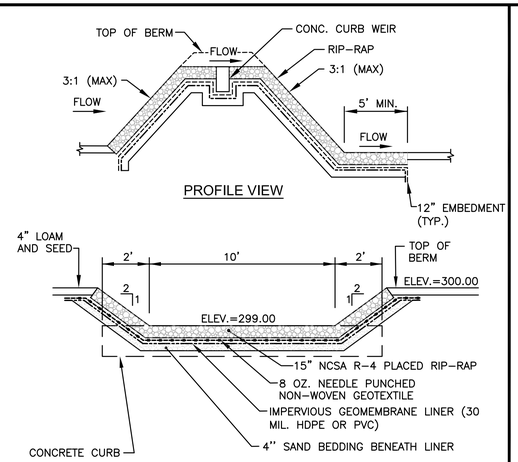
SIDE VIEW
NOT TO SCALE

FRONT VIEW
NOT TO SCALE

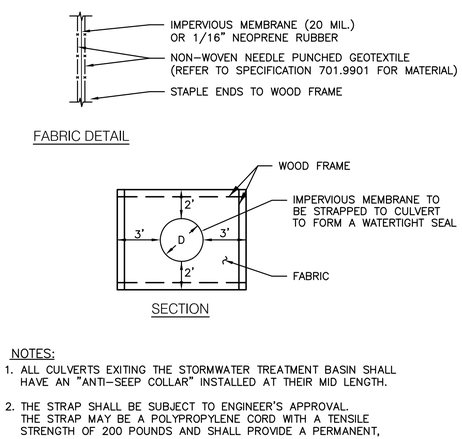
RIPRAP WEIR IN SWALE DETAIL
NOT TO SCALE



SEDIMENT FOREBAY STONE CHECK DAM DETAIL
NOT TO SCALE



EMERGENCY SPILLWAY DETAIL
NOT TO SCALE



NOTES:
1. ALL CULVERTS EXITING THE STORMWATER TREATMENT BASIN SHALL HAVE AN "ANTI–SEEP COLLAR" INSTALLED AT THEIR MID LENGTH.
2. THE STRAP SHALL BE SUBJECT TO ENGINEER'S APPROVAL. THE STRAP MAY BE A POLYPROPYLENE CORD WITH A TENSILE STRENGTH OF 200 POUNDS AND SHALL PROVIDE A PERMANENT, NON–SLIP, TIE.

ANTI-SEEP COLLAR DETAILS
NOT TO SCALE

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cel@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6/7/23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

MISCELLANEOUS DETAIL PLAN No. 4

DATE:	*SCALE:*
AUGUST 7, 2023	AS SHOWN

DWG. NAME: 2747–C10–DETAIL4–R3.dwg

REVISIONS

NUMBER	*REMARKS*	*DATE*
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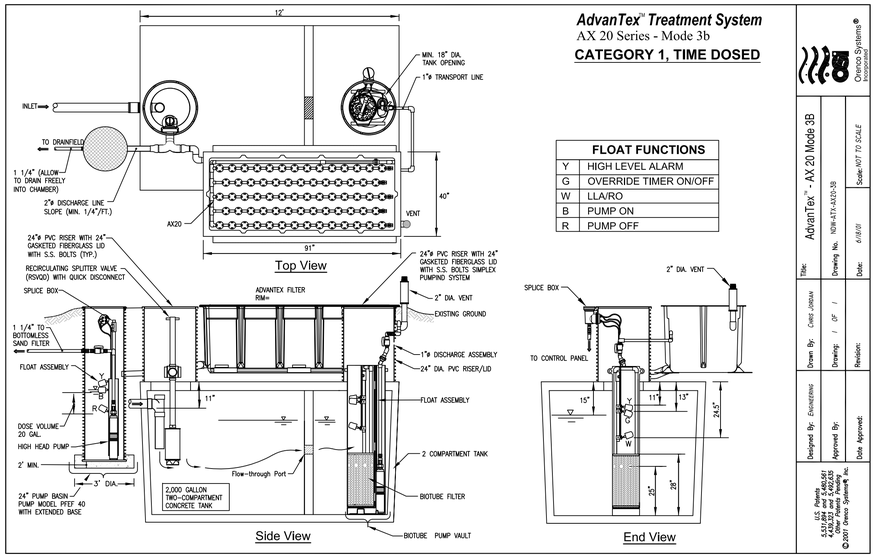
DRAWING NUMBER

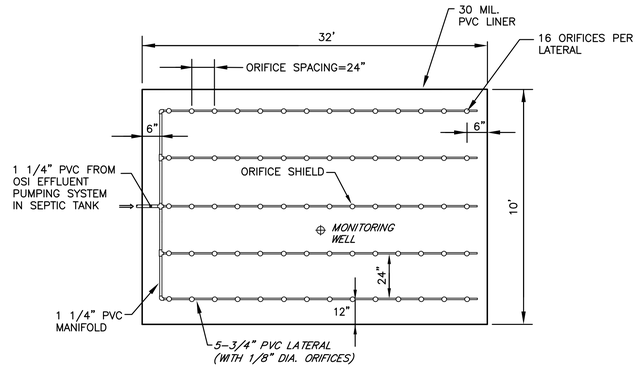
C10

SHEET: 11 *OF:* 14

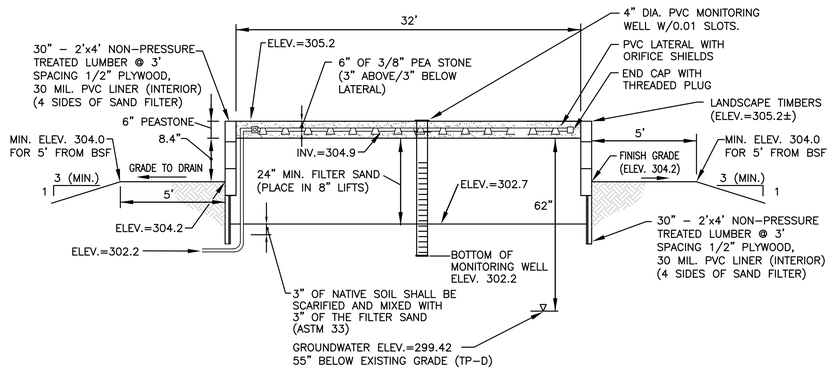


NOTE

SUPPLIER MUST PROVIDE ANTI-FLOTATION COLLARS TO ADDRESS SEASONAL HIGH WATER TABLE OF 299.42.



TOP VIEW - BOTTOMLESS SAND FILTER



SIDE VIEW - BOTTOMLESS SAND FILTER

BOTTOMLESS SAND FILTER
NOT TO SCALE

DESIGN FLOW

USE	DESIGN UNITS	UNIT FLOW RATE (gpd/unit)	DESIGN FLOW (gpd)
OFFICE (24 EMPLOYEES)	PER EMPLOYEE	15 gpd	360 gpd

SEPTIC TANK SIZING WITH NO GARBAGE GRINDER

REQUIRED SIZE: GREATER OF 1,000 GALLONS OR 720 GALLONS (2 x 360 GPD)
USE: 2,000 GALLON TANK

LEACHING SYSTEM SIZING

TYPE OF SYSTEM: BOTTOMLESS SAND FILTER

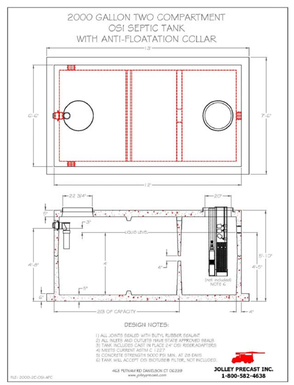
SOIL CATEGORY = 6
CATEGORY 1 TECHNOLOGIES LOADING RATE = 2.3 gal/S.F./DAY
PRETREATMENT DEVICE = ADVANTEX (AX-20)

MIN. LEACHING AREA REQUIRED:
360 GPD / (2.3 GAL/S.F./DAY) = 156.5 S.F.

LEACHING AREA PROVIDED = 32' x 10' = 320 S.F.

PUMP - DOSING CALCULATIONS

LENGTH OF EACH DISTRIBUTION LINE = 31 LF (5 LINES)
DISTRIBUTION LINE ORIFICES = 80 (24" SPACING)
DOSING = 0.25 GAL/ORIFICE = 20 GALLONS
PUMP CHAMBER = 24" DIAMETER
PUMP VOLUME = PUMP ON/PUMP OFF (10.2") = 20 GAL/CYCLE



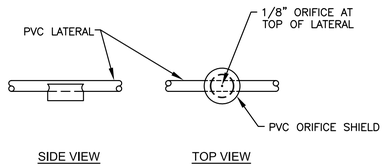
SEPTIC TANK DETAIL

NOTES

1. ALTERNATE PRECAST MANUFACTURER MAY BE USED BUT WILL REQUIRE APPROVAL FROM ENGINEER PRIOR TO CONSTRUCTION.
2. INLET TEE SHALL EXTEND DOWNWARD AT LEAST 1' BELOW FLOW LINE.
3. OUTLET TEE SHALL EXTEND DOWNWARD 1/3 THE DEPTH OF THE FLOW LINE.

ONSITE WASTEWATER TREATMENT SYSTEM NOTES:

1. THERE ARE NO PUBLIC SEWERS WITHIN 200' OF THE PARCEL.
2. THERE ARE NO KNOWN EXISTING OR PROPOSED PRIVATE WELLS WITHIN 200' OF THE SYSTEM, AND THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500'. THERE ARE NO KNOWN EXISTING OR PROPOSED NON-POTABLE WELLS WITHIN 100' OF THE OWTS.
3. ALL KNOWN WATERCOURSES, WETLANDS, DRAINS AND STORMWATER MANAGEMENT SYSTEMS WITHIN 200' OF THE PROPOSED OWTS ARE SHOWN.
4. THE SITE IN NOT WITHIN THE CRITICAL RESOURCE AREA AS DEFINED BY SECTION 6.42 OF THE OWTS RULES AND REGULATIONS. THE NEAREST CRITICAL RESOURCE AREA IS >1 MILE.
5. STRIPPING SHALL NOT BE DONE INTO THE WATER TABLE.
6. NO VEHICULAR TRAFFIC IS ALLOWED ON BSF.
7. SURFACE RUNOFF TO BE DIVERTED FROM SYSTEM AND BSF.
8. THE PIPING FOR BUILDING SEWER TO BE SOLID SDR 35 PVC PIPE OR SCHEDULE 40 PVC PIPE.
9. THE LICENSED INSTALLER MUST FOLLOW ALL R.I.D.E.M. "RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, EFFECTIVE DATE 11/25/2018."
10. NO KNOWN DRAINS, PROPOSED DRAINS OR UNDERDRAINS DISCHARGING INTO A SURFACE WATER SUPPLY ARE WITHIN 25' OF LEACH FIELD.
11. ALL DISTURBED AREAS ARE TO RECEIVE 4" OF LOAM & SEED, UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR MUST ADHERE TO ALL CONSTRUCTION INSPECTION PROCEDURES AND REQUIREMENTS OF R.I.D.E.M. AND CROSSMAN ENGINEERING, INC.
13. NO GARBAGE DISPOSAL GRINDER IS ALLOWED TO BE USED.
14. THE SITE IS NOT WITHIN THE WATERSHED OF THE PUBLIC WATER SUPPLY AS DEFINED IN SECTION 6.42, AND DRAINS WITHIN THE VICINITY DO NOT DISCHARGE DIRECTLY OR INDIRECTLY TO A CRITICAL RESOURCE AREA IDENTIFIED IN RULE 6.42.
15. THE A HORIZON SOIL LAYER BELOW BSF SHALL BE REMOVED.
16. THE OWTS INSTALLER SHALL NOTIFY THE OWTS DESIGNER OF THE CONSTRUCTION START DATE AT LEAST THREE (3) WORKING DAYS IN ADVANCE.
17. NO OWTS CONSTRUCTION SHALL BEGIN UNTIL AUTHORIZED BY R.I.D.E.M. AND THE OWTS DESIGNER.
18. PRIOR TO PURCHASE/ORDER OF PRODUCTS, THE INSTALLER MUST PROVIDE "SHOP DRAWINGS" FOR ALL MATERIALS. APPROVAL MUST BE GRANTED BY THE DESIGNER PRIOR TO CONSTRUCTION.
19. CONTRACTOR SHALL PROVIDE A WATER-TIGHT CERTIFICATE FROM THE CONCRETE MANUFACTURER FOR THE SEPTIC TANK AND PUMP CHAMBER.



NOTE
SHIELD AND ORIFICE MUST BE ORIENTED BELOW LATERAL FOR COLD WEATHER APPLICATION

COLD WEATHER ORIFICE DETAIL
NOT TO SCALE

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cel@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

MISCELLANEOUS DETAIL PLAN No. 5

DATE: AUGUST 7, 2023
SCALE: AS SHOWN

DWG. NAME: 2747-C11-DETAIL5-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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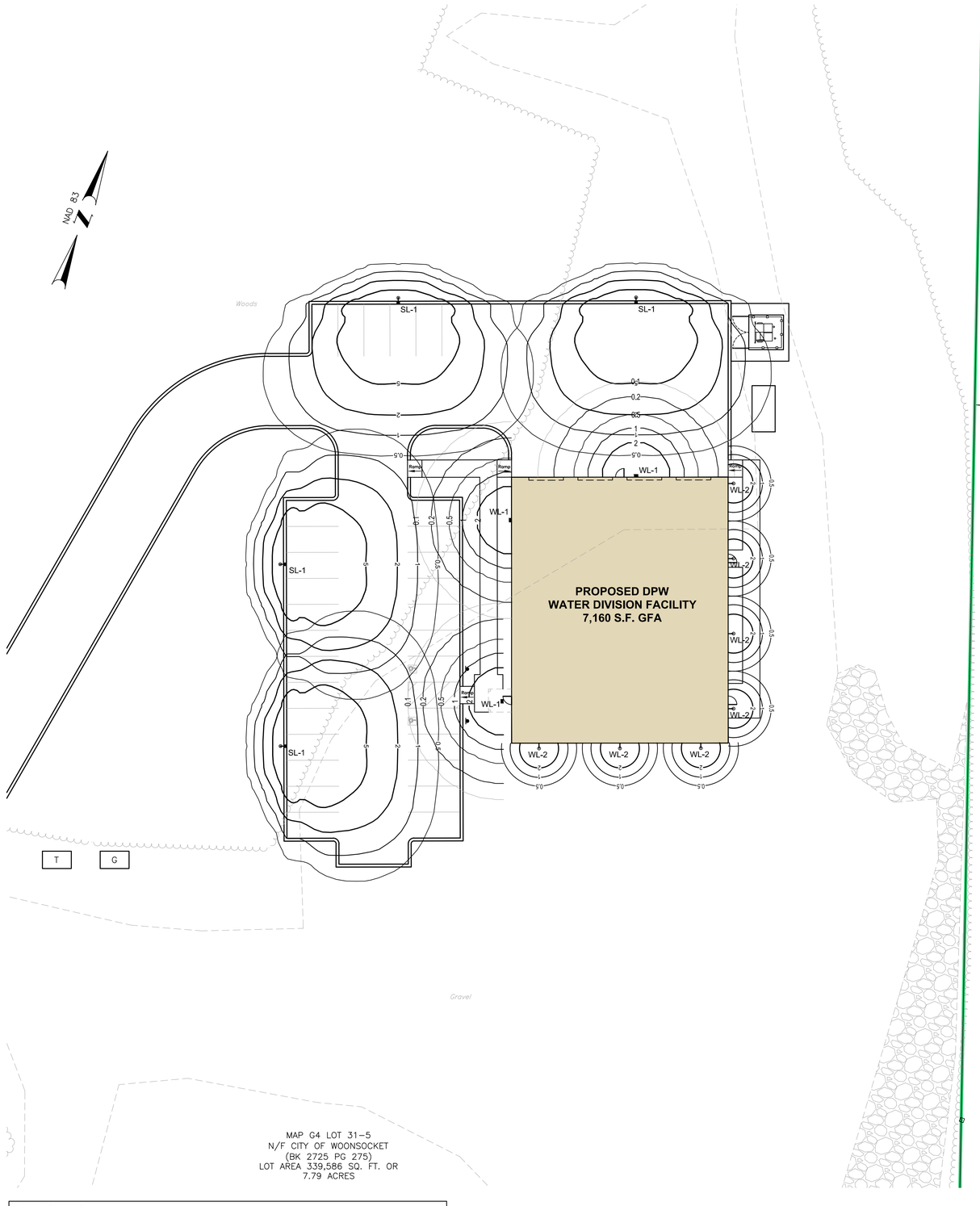
DRAWING NUMBER

C11

SHEET: 12 *OF:* 14



MAP G4 LOT 31–5
N/F CITY OF WOONSOCKET
(BK 2725 PG 275)
LOT AREA 339,586 SQ. FT. OR
7.79 ACRES

SITE LIGHTING				
Symbol	Qty	Label	Manufacture	Description
⊂■	4	SL-1	LSI Lighting	XGMB-HSS-FT-LED-LW-CW-UE-BLK / 14 FT MTG - SINGLE
■	3	WL-1	LSI Lighting	MCOWP-43K-45K-BZ-PC120/ 15 FT MTG
⚲	7	WL-2	LSI Lighting	RD100 12L GBK GB H3 GBK - Wall Mounted @ 10' AFG

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LED AREA LIGHTS - (XGBM)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XGBM 5 LED HO CW UE WHT PCM**

Prefix	Distribution	Light Level	Drive Current	Color Temperature	Input Voltage	Finish	Optional Controls	Optional Sensor/Options
XGBM = LED Streetliner	1 = Forward Throw FTH = Forward Throw - Automotive 3 = Type III 5 = Type V	(Blank) = Standard DIM = Dimming	(Blank) = 530mA HO = 700mA	CW = Cool White (5000K) NW = Neutral White (4000K)	(Blank) = Universal Voltage (120-277)	BLK = Black BRZ = Bronze GPT = Graphite MSV = Metallic Silver SVG = Satin Verde Green WHT = White **Optional Color Finish** 40 = Light Gray 55 = Charcoal Metallic 57 = Black 64 = Blue Metallic 69 = Dark Green 81 = Dark Red 91 = Tomato Red 95 = Bronze 700 = Alike Silver Metallic	**Wireless Control Receiver:** PCM = Multi-Node Control System PCM1 = Wireless Control System PCM2 = Wireless Control System GCM = Gen2 Control System GCM1 = Gen2 Control System GCM2 = Gen2 Control System **Stand-Alone Control** (Sensor + Node) DIM = 0-10 volt dimming* ELC = Electronic Selectable ELU = On-board Switching* (Dusk-to-dawn operation with external signal - required 120-277V nominal system voltage)	**Sensor:** NEC = Integral NEMA Receptacle* PCS120 = 2500 Outdoor Type Photocell PCS208 = 2500 Outdoor Type Photocell PCS240 = 2500 Outdoor Type Photocell PCS277 = 2500 Outdoor Type Photocell PCS347 = 2500 Outdoor Type Photocell **Options:** BSL = 8' Bracket (3 and 2 DIN only) TB = Terminal Block

LUMINAIRE EPA CHART - XGBM		
	2" Bracket	12" Bracket
Single	2.3	3.4
2 @ 90°	4.7	4.8
2 @ 180°		4.7
3 @ 90°	3" Bracket	2.2
3 @ 120°	Required	7.3
4 @ 90°		8.6

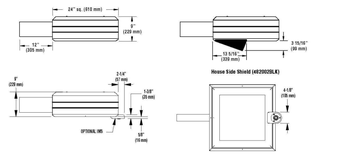
Note: House Side Shield adds .6 to Sqft to EPA. Consult factory.

ACCESSORY ORDERING INFORMATION* (Accessories are field installed)	
Description	Order Number
(GBK) - Square Mast Arm Adapter	GBKMA-S
(HSS) - House Side Shield (Black only)	HSS-BLK
(RFP) - Round Pole Plate	RFP-BLK
(MS-6) MM * CLS. - Wall Mount Plate	MS-6-MM-CLS
(MS-8) (S-B) (S-C) S - Radius Arm	(S-B) (S-C) S
(MCC-6) (S-T) (S-C) S - Crossway Bracket for round or square poles.	(MCC-6) (S-T) (S-C) S
(PCS) Single Fusing (120V)	PCS1SF
(PCS2) Single Fusing (277V)	PCS2SF
(DKSDM) Double Fusing (480V)	DKSDM
(PCSC) Single Fusing (347V)	PCSCSF
(PMOS12) - 120 .1/KV Fine Mount Occupancy Sensor	PMOS12
(PMOS24) - 208 .240 .277V Fine Mount Occupancy Sensor	PMOS24
(PMOS48) - 347 .480V Fine Mount Occupancy Sensor	PMOS48
(PMOS480) - 480V Fine Mount Occupancy Sensor	PMOS480

(Accessories are field installed)

FOOTNOTES:
1 - Use with 3" Traditional drilling pattern.
2 - For wireless controls information and accessories, see Controls section.
3 - Requires a SmArmature and override switch. Not compatible with BLS or ELU options.
4 - Not compatible with NEC or BLS options.
5 - Not compatible with wireless controls system, DIM or NMS option.
6 - Not compatible with wireless controls system, DIM or BLS option.
7 - House Side Shield is sold by fixture EPA. Consult factory.
8 - Fusing must be located in the hand hole or pole.
9 - Not available with PCM/PCM2 wireless controls systems in the fixture. Consult factory.
10 - Photocell must be ordered separately. 7 pin standard. See Accessories.

DIMENSIONS



Project Name _____ Fixture Type _____ 10/26/17

Catalog # _____ © 2017 LSI INDUSTRIES INC.

ALUMINUM SQUARE POLES (SOFT CORNER)

POLE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **5SQB5 A188 25 S BRZ**

Pole Series	Material	Height	Mounting Configuration*	Pole Finish	Options
Bolt-On Mount - See selection guide for patterns and fixture matches. **4SQB3** - 3" Radius of Drilling Pattern **4SQB5** - 5" Radius of Drilling Pattern **5SQB3** - 3" Traditional Drilling Pattern **5SQB5** - 5" Traditional Drilling Pattern **5SQB6** - 6" Traditional Drilling Pattern **Tenon Mount** - See selection guide for tenon and trunnion/bracket matches. **5TON** **5SQTON** **6SQN** **Internal Slip-fitter** No mounting holes or pole caps - Use with (BKA-4SSF, BKA-5SSF, BKA-6SSF & BKA-8SSF **4SSF** **5SSF**	A570 = 570 Aluminum A188 = 188 Aluminum A250 = 250 Aluminum	8 10 12 14 16 18 20 25 30* 35* 40*	S - Single/Parallel D180* - Double T90* - Triple Q90* - Quad N - Tenon Mount *	BRZ - Bronze BLK - Black WHT - White SVG - Satin Verde Green MSV - Metallic Silver	BP - Bottom Outlet Provision Less GFI NF PPG - Pedicure Outlet Provision With GFI NF LAS - Less Anchor Bolts

Consult Pole Selection Chart on opposite page

FOOTNOTES:
1 - See Area Lighting Brackets - Built-on and SMSSSTAMD Area Lighting Brackets pages for trunnion/ Slip-fitter brackets.
2 - Not available with 4" Square Base Plate.
3 - Pole includes factory installed vibration damper.
4 - TMSSV mounting configuration not available.
5 - Specify location in feet above base of pole and side orientation. Minimum height is 10' up from standard hand hole.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
(SCHC - 4" Square Cast 2-Piece Base Cover	SSBCBOLT
(SCHC - 5" Square Cast 2-Piece Base Cover	SSCHC5
(SCHC - 6" Square Cast 2-Piece Base Cover	SSCHC6

BOLT CIRCLE

4" (102mm) Square 9-13/16" (250mm) Square Base Plate	5" (127mm) Square 11-61/64" (294mm) Square Base Plate	6" (152mm) Square 12-5/8" (320mm) Square Base Plate
7" (178mm) Dia. Bolt Circle w/ 1/2" (13mm)	11" (279mm) Dia. Bolt Circle w/ 1/2" (13mm)	12-13/16" (325mm) Dia. Bolt Circle w/ 3/4" (19mm)
Bolt Circle: 24" ea. 120° (2/3Meter ea. 120mm)	Bolt Circle: 11" ea. 120° (279mm ea. 120mm)	Bolt Circle: 12-13/16" ea. 120° (325mm ea. 120mm)
Anchor Bolt Spacing: 3/4" dia. x 17" c/ 3 hook (19mm x 432mm c/ 76 mm)	Anchor Bolt Spacing: 3/4" dia. x 17" c/ 3 hook (19mm x 432mm c/ 76 mm)	Anchor Bolt Spacing: 1" dia. x 30" c/ 4 hook (25mm x 914mm c/ 102mm)
Anchor Bolt Projection: 3-1/4" (76mm)	Anchor Bolt Projection: 3-1/4" (82mm)	Anchor Bolt Projection: 4" (102 mm)
Base Plate Dimensions: 9-13/32" sq. x 3/8" thk. (250mm x 10mm)	Base Plate Dimensions: 11-45/64" sq. x 1/2" thk. (294mm x 13mm)	Base Plate Dimensions: 12-3/8" sq. x 5/16" thk. (325mm x 7.6mm)

Note: Base plate thicknesses may change without notice. Do not use for setting anchor bolts. Consult factory for the base plate templates.

EPA INFORMATION

All poles are guaranteed to meet the EPA requirements listed. Pole selection is not responsible if a pole number has a lower EPA rating than the indicated wind loading zone where the pole will be installed.

CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. Pole manufacturer cannot accept responsibility for harmful damage caused in these situations.

NOTE: Pole calculations include a 1.3 gust factor over steady wind. Poles are designed to withstand 1.3 times the listed steady wind and will break/yield. In EM MPH. EPA are for locations 100 miles away from hurricane ocean lines. Consult LSI for other areas. Note: Hurricane ocean lines are the Atlantic and Gulf of Mexico coastal areas. For applications in Canada, and other areas with specific requirements other than commercial criteria, consult factory.

Project Name _____ Fixture Type _____ 10/26/17

Catalog # _____ © 2017 LSI INDUSTRIES INC.

NOTE:

1. LED LIGHT FIXTURES WITH SIMILAR FOOTCANDLE SPREADS MAY BE SUBSTITUTED.
2. WALL PACK LIGHTING AROUND BUILDING EXTERIOR SHOWN IN THIS PLAN REPRESENTS A TYPICAL ILLUMINATION DIAGRAM. SPECIFIC MODEL WITH SIMILAR FOOTCANDLE TO BE DETERMINED PRIOR TO CONSTRUCTION.
3. LIGHT FIXTURES SHALL BE DARK SKY COMPLIANT

MCOWP43W
43 Watt LED Medium Cut-Off Wall Pack

LSI Wall Lights feature traditional housings that provide familiar design with known applications. These fixtures make the switch from Metal Halide to LED easy. Mid-power LEDs provide glare-free white light.

Dimmable · cULus Listed · DLC · RoHS Compliant · ARRA Qualified · IDA Approved

Features & Specifications

Performance

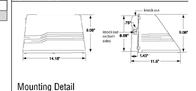
4500K		
Delivered Lumens	Efficacy	Wattage
5,366	130.2	41.20

Optical System
- Lens assembly is designed to provide high efficiency and to target the light where needed to satisfy outdoor lighting requirements.
- Positioning of the LEDs result in the light being directed to desired locations eliminating glare and offensive light.
- 4500K color temperature.
- Minimums CRI of 82

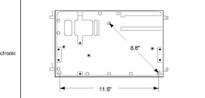
Electrical
- High performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz
- Total System Watts: 41.20 Watts
- Total harmonic distortion less than <20%
- Power factor>.9.0
- Input power stays constant over life.
- Driver Off-State Power is 0 watts.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.
- Minimums 4kV surge rating

Construction
- Rugged traditional aluminum die cast housing provides proven environmental protection for LED modules.
- Traditional fixture designs provide a familiar look and standard installation height.
- Retrofitting to existing fixtures allows the ability to upgrade fixtures gradually, while retaining the in-scene overall fixture appearance throughout a facility.
- The smooth housing prevents debris build up and maximizes airflow over housing.

Dimensions



Mounting Detail



Type: _____

LSI Abolite® LED Standard Dome

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **RD 300 17L UNV 35 GPT LDS96WL**

Prefix	Lumen Package	Voltage	Color Temp	Lens†	Finish	Mounting Options
RD 100 RD 150 RD 200 RD 300	10L - 1700 lms 15L - 1700 lms 17L - 1700 lms 24C - Incandescent	UNV - Universal Voltage (120/277V) 120 - VAC	50 - 5,000K 40 - 4,000K 35 - 3,500K 30 - 3,000K 27 - 2,700K DUAL - CCT	Blank - Flat lens (indoor) (35 only) CGDA - Clear Glass Globe 6-3/4" FGDA - Frosted Glass Globe 6-3/4" PGDA - Prismatic Glass Globe 6-3/4"	MSV - Metallic Silver GWT - Gloss White GBK - Gloss Black GRD - Gloss Red GPT - Textured Graphite BRZ - Bronze DGP - Dark Grayser STG - Satin Turquoise SVG - Satin Verde Green	LDSSWMG - Powered Arm. For use with storm or bracket mounting in lieu of indoor locations. CA12SWMT - 12' gooseneck white cord (set and canopy)* CA12SWBLK - 12' gooseneck black cord (set and canopy)* CA12SWMTB - 12' gooseneck white cord (set and canopy with SWAVE)* CA12SWBLKB - 12' gooseneck black cord (set and canopy with SWAVE)*

1. Lamp supplied by retrofit 2X9 MED Base bulbs.
2. Not rated for indoor LED applications only. Strike required for outdoor applications.
3. Contours are stamp location only.

Accessory Ordering Information

CANOPY ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" (19mm) Tap Decorative Box Cover Aligner - Gloss White	BCOVER-S GWT
3/4" (19mm) Tap Round Box Cover Aligner - Zinc	BCVRS-ZINC
3/4" (19mm) Tap Square Box Cover Aligner - Zinc	BCVRSQ-ZINC

Standard BCVRS finish is Gloss White Powder; other RLM colors available.

WIRE GUARD ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
12" (304mm) Convex Wire Guard - Metallic Silver	CGG 12 MSV
14" (356mm) Convex Wire Guard - Metallic Silver	CGG 14 MSV
18" (490mm) Convex Wire Guard - Metallic Silver	CGG 18 MSV
18" (457mm) Convex Wire Guard - Metallic Silver	CGG 18 MSV

Standard finish is Metallic Silver Powder; other RLM colors available

GLOBE GUARD ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
4-3/4" Cast Aluminum Globe Guard	GGDCG
6-3/4" Wire Globe Guard	GGDWG

Standard finish is Natural Aluminum; other RLM colors available

STEM ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" x 2" (19mm x 305mm) Aluminum Stem - Gloss White	ST 2 G GWT
3/4" x 6" (19mm x 152mm) Aluminum Stem - Gloss White	ST 6 G GWT
3/4" x 12" (19mm x .4m) Aluminum Stem - Gloss White	ST 12 G GWT
3/4" x 18" (19mm x .6m) Aluminum Stem - Gloss White	ST 18 G GWT
3/4" x 24" (19mm x .6m) Aluminum Stem - Gloss White	ST 24 G GWT
3/4" x 36" (19mm x .9m) Aluminum Stem - Gloss White	ST 36 G GWT
3/4" x 48" (19mm x 1.2m) Aluminum Stem - Gloss White	ST 48 G GWT
3/4" x 60" (19mm x 1.5m) Aluminum Stem - Gloss White	ST 60 G GWT
3/4" x 72" (19mm x 1.8m) Aluminum Stem - Gloss White	ST 72 G GWT
3/4" (19mm) Alum. Stem Coupler - Gloss White	COP 2 GWT

Standard finish is Gloss White Powder; other RLM colors available.
*CAS Wall Plate Bracket ordered separately

GOOSE NECK BRACKETS ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 3 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 4 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 5 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 6 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 7 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 8 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 9 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 10 G GWT
3/4" (19mm) Aluminum Gooseneck Bracket - Gloss White	GB 12 G GWT

Standard finish is Gloss White Powder; other RLM colors available.

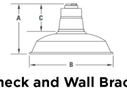
WALL BRACKETS ORDERING INFORMATION (Accessories are field installed)	
Description	Order Number
Contemporary Wall Bracket - Medium - Gloss White	CWBM 1 GWT
Contemporary Wall Bracket - Long - Gloss White	CWBL 1 GWT
Contemporary Wall Box - Gloss White	CBD GWT
Wall Plate Bracket*	CAS GWT

Standard finish is Gloss White Powder; other RLM colors available.
*CAS to be ordered for Client mount applications.

PRODUCT DIMENSIONS

Back to Quick Links

Prefix	Height (A)	Diameter (B)	Neck (C)	Weight (lbs./kg.)
RD0100	8-1/4" (210mm)	12" (305mm)	4-1/2" (114mm)	2.5 (1.1kg)
RD0150	9-1/2" (241mm)	14" (356mm)	4-1/2" (114mm)	3.5 (1.59kg)
RD0200	10" (254mm)	16" (406mm)	4-1/2" (114mm)	3.5 (1.59kg)
RD0300	11" (279mm)	18" (457mm)	5" (127mm)	4.0 (1.81kg)



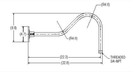
LSI Abolite Gooseneck and Wall Brackets

3/4" Single Reflector Gooseneck Wall Bracket. Features rigid conduit and cast wall plate which fits 4" octagonal box (by other). Brackets are finished in gloss white powder, additional colors are available.

NOTE: Brackets feature 3/4" stems which slip fit into wall plate (wall end is unthreaded). Conduit may be cut down (in the field by other) to shorten bracket length. CAS wall plate included with all gooseneck.

All dimensions displayed in inches.

GB H 3 GWT



- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6-27-23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

LIGHTING PLAN

DATE: AUGUST 7, 2023

SCALE: 1"=20'

DWG. NAME: 2747–E01–LIGHT–R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
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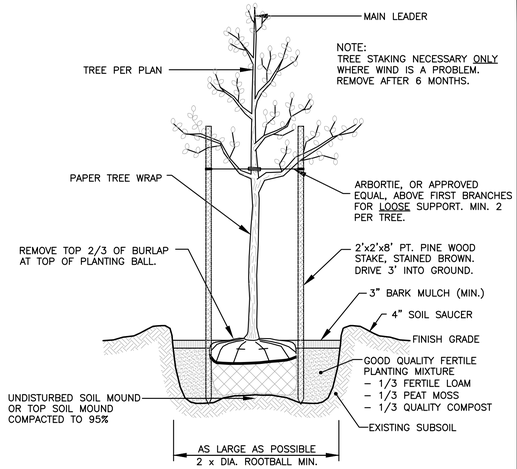
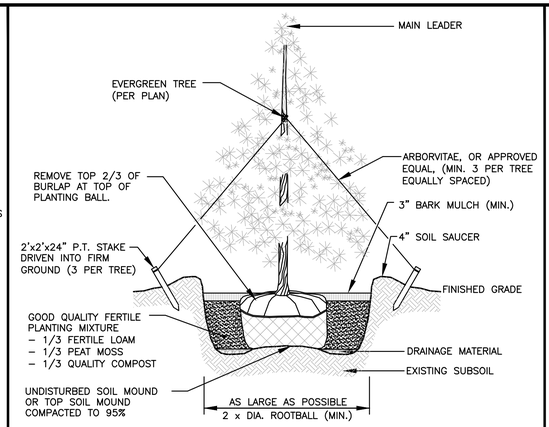
DRAWING NUMBER

E1

SHEET: 13 *OF:* 14

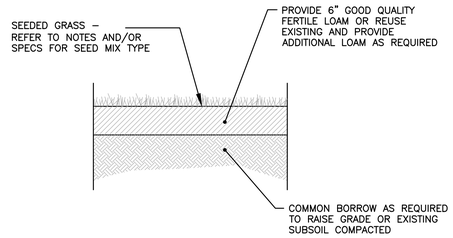


DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



NOTE:
TREE STAKING OR SUPPORT NECESSARY ONLY WHERE WIND IS A PROBLEM, REMOVE AFTER SIX (6) MONTHS.

EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



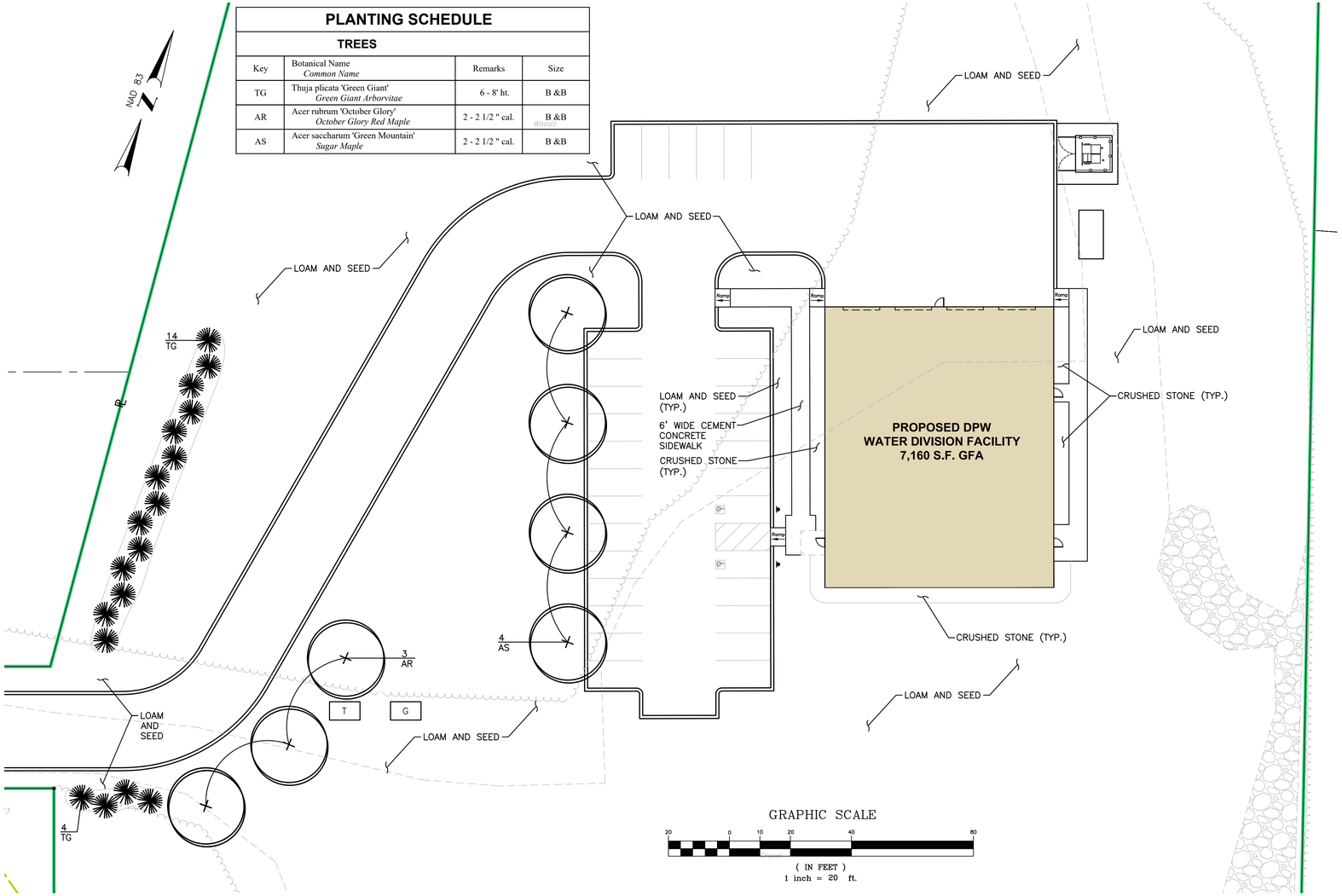
NOTE:
THE CONTRACTOR WILL BE RESPONSIBLE FOR WATERING LAWN DURING THE COURSE OF THE GROWING SEASON FOR A PERIOD OF ONE (1) YEAR.

LOAM-SEED DETAIL
NOT TO SCALE

PLANTING SCHEDULE

TREES

Key	Botanical Name *Common Name*	Remarks	Size
TG	Thuja plicata 'Green Giant' *Green Giant Arborvitae*	6 - 8' ht.	B &B
AR	Acer rubrum 'October Glory' *October Glory Red Maple*	2 - 2 1/2 " cal.	B &B
AS	Acer saccharum 'Green Mountain' *Sugar Maple*	2 - 2 1/2 " cal.	B &B



SEEDING NOTES

1. LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 6" OVER ALL AREAS DESIGNATED ON PLANS.
2. SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
3. FERTILIZE WITH 10–10–10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
4. LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DICING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
5. APPLICATION OF SEED:
   A. RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
   B. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:
      SPRING SEEDING: MARCH 15 TO MAY 31
      FALL SEEDING: AUGUST 15 TO OCTOBER 15
   C. THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
   D. DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
   E. OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
   F. REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
   G. SEED:
      a. SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

SEED MIX No. 1
(SLOPES, MEADOWS AND GENERAL RESTORATION AREA)

TYPE	% BY WEIGHT
CREEPING RED FESCUE	70%
ASTORIA BENTGRASS	5%
BIRDSFOOT TREFOIL	15%
PERENNIAL RYE GRASS	10%

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 2
(ENDOPHYTE ENHANCED MIX)
(MOWED AREAS)

TYPE	% BY WEIGHT
IMPROVED PERENNIAL RYE	30%
TURF TYPE TALL FESCUE	30%
CHEWINGS FESCE	30%
KENTUCKY BLUEGRASS 98/85	10%

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 3
(DETENTION/INFILTRATION AREAS)

TYPE	% BY WEIGHT
CREEPING RED FESCUE	28%
TALL FESCUE	24%
PERENNIAL RYE GRASS	18%
LITTLE BLUESTEM	15%
REDTOP	4%
NORTHEAST WILDFLOWER MIX	4%

APPLICATION RATE = 220 lbs. / ACRE
OR 5 LBS. PER 1,000 S.F.

LANDSCAPE CONSTRUCTION NOTES

1. FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
2. LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 6" OVER ALL PLANTED AREAS.
3. BIO–DETENTION AREAS–PLANTING SOIL AND MULCH:
   LOAMY SAND TO A SANDY LOAM–80% SAND <20% SILT, <2% CLAY. WELL AGED GRADED COMPOST (25% OF SOIL MIX). WELL AGED, AERATED DARK BROWN HARD–WOOD MULCH (AGED 6 MONTHS).
4. NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
5. ONLY NURSERY–GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
6. CALIPER MEASURMENTS FOR ALL NEW PLANT STOCK SHALL BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCHES AND TWELVE (12) INCHES ABOVE GRADE FOR TREES OVER FOUR (4) INCHES.
7. ALL TREES SHALL BE A MINIMUM OF SEVEN (7) FEET ABOVE FINISHED GRADE WHEN TREES ARE LOCATED WITHIN VEHICULAR AND PEDESTRIAN TRAVEL WAYS.
8. SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRMING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
9. STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
10. WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING. IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
11. PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE–THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
12. FERTILIZING: FERTILIZE SHRUB BEDS WITH 10–10–10 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AS PER MANUFACTURER'S INSTRUCTIONS. APPLY A SECOND APPLICATON OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
13. LIMING: ADD POWDERED LIME EVERY SIX MONTHS – OR SLOW RELEASE GRANULAR LIME–AS PER MANUFACTURER'S INSTRUCTION.
14. MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" SHREDDED BARK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
15. GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER.

- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

Crossman Engineering

Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone (401) 738-5660

Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
Phone (508) 695-1700

Email: cei@crossmaneng.com

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
6-27-23

ISSUED FOR BIDDING

KEY PLAN

PROJECT TITLE:

WOONSOCKET DPW WATER DIVISION FACILITY
MAP G4, LOT 31-5
ZONING DISTRICT: R-1
VERY LOW DENSITY SINGLE-FAMILY RESIDENTIAL DISTRICT
ROY AVENUE
WOONSOCKET, RI

PREPARED FOR:

CITY OF WOONSOCKET
169 MAIN STREET
WOONSOCKET, RI

DRAWING TITLE:

LANDSCAPE PLAN

DATE: AUGUST 7, 2023
SCALE: 1"=20'

DWG. NAME: 2747–L01–LAND–R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
--	--	--

DRAWING NUMBER

L1

SHEET: 14 *OF:* 14

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F-1	24" WIDE x 12" THICK, CONTINUOUS	(3) #5 BARS CONTINUOUS BOTTOM
F-2	5'-0" x 1'-0" x 12"	(7) #5 BARS LONG WAY TOP & BOTTOM (9) #5 BARS SHORT WAY TOP & BOTTOM
F-3	3'-6" x 3'-6" x 12"	(5) #5 BARS EACH WAY BOTTOM
F-4	32" WIDE x 12" THICK, CONTINUOUS	(4) #5 BARS CONTINUOUS BOTTOM

PIER SCHEDULE

MARK	SIZE (L x W)	VERTICAL REINFORCING AND CAST FOOTING DOWELS	TIES
P-1	24"x24"	(10) #8's VERTICAL	#3's AT 12" OC
P-2	12" x 18"	(6) #6's VERTICAL	#3's AT 12" OC
P-3	18" x 18"	(8) #6's VERTICAL	#3's AT 12" OC

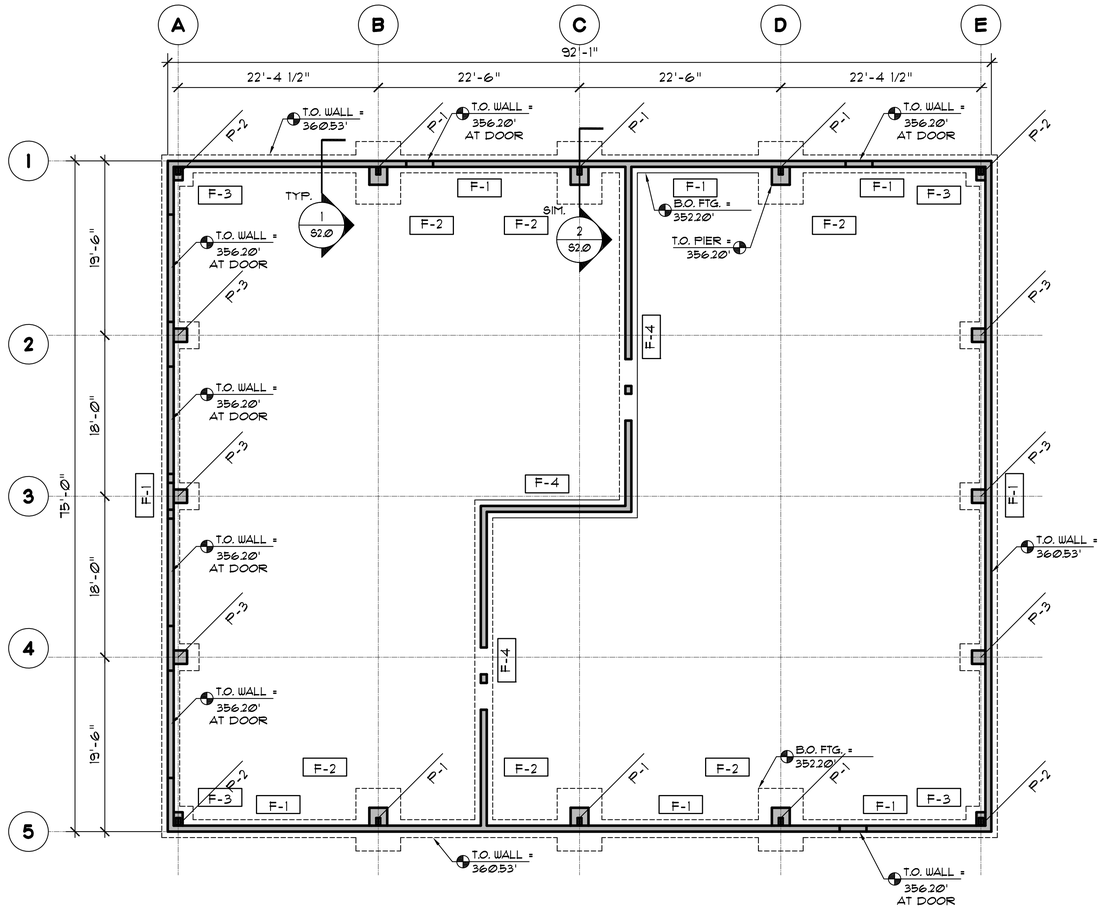
1. TIES TO HAVE 2" COVER ON EACH SIDE. VERTICAL BARS TO BE PLACED WITHIN TIES.
2. EACH VERTICAL DOWEL TO HAVE 6" HOOK AND CAST INTO FOOTING. TIE TO FOOTING REINFORCING MAT.

FOUNDATION NOTES

1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH RHODE ISLAND SBC-1-2013. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION. COORDINATE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPENCIES PRIOR TO CONSTRUCTION.
2. ALL FOOTINGS ARE TO BE SUPPORTED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 5000 PSF. NOTIFY ARCHITECT/ENGINEER OF SOIL CONDITIONS THAT DO NOT MEET THE REQUIRED DESIGN BEARING CAPACITY.
3. SATISFACTORY SOILS: ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, AND SP OR A COMBINATION OF THESE GROUPS. FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER ORGANIC MATTER.
4. COMPACTION
   A. STRUCTURAL FILL UNDER FOOTINGS = 96%
   B. STRUCTURAL FILL UNDER SLABS = 95%
   C. BACKFILL AGAINST OUTSIDE OF FOUNDATION WALLS = 90%
5. VERIFY ALL FOUNDATIONS WILL BE AT OR BELOW FROST PROTECTION ELEVATION OF 4'-0" BELOW GRADE AND IN ACCORDANCE WITH RHODE ISLAND STATE BUILDING CODE. COORDINATE BETWEEN ARCHITECTURAL, CIVIL, AND STRUCTURAL DRAWINGS PRIOR TO STARTING FORMWORK.
6. ALL UNSUITABLE AND ORGANIC SOIL UNDER FOOTINGS, WALLS, AND SLABS TO BE REMOVED AND REPLACED WITH STRUCTURAL FILL.
7. ALL CONCRETE WORK IS TO CONFORM TO THE CURRENT EDITION OF THE ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).
8. CONCRETE SHALL BE NORMAL WEIGHT WITH WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI FOR FOOTINGS AND FOUNDATION WALLS.

GENERAL NOTES

1. ALL FOUNDATION INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS, INCLUDING LAYOUT, PIER SIZES, FOOTING SIZES, REINFORCING, DETAILS, ETC. IS BASED ON ESTIMATED LOADS FROM PRE-ENGINEERED STEEL BUILDING. THIS INFORMATION IS SHOWN FOR ESTIMATING AND BIDDING PURPOSES ONLY. FINAL LAYOUT, SIZES, AND REINFORCING OF FOUNDATION ELEMENTS ARE SUBJECT TO CHANGE BASED ON ACTUAL DESIGN REACTION FORCES THAT WILL BE PROVIDED BY THE METAL BUILDING MANUFACTURER DURING THE DESIGN AND SHOP DRAWING REVIEW PROCESS.
2. ALL FOUNDATION FOOTING EXCAVATION & BACKFILLING WILL BE DONE BY BURRILLVILLE DEPARTMENT OF PUBLIC WORKS.
3. METAL BUILDING MANUFACTURER TO INCORPORATE DESIGN LOAD FOR FUTURE SOLAR PANELS ON THE SOUTH SIDE OF THE ROOF RIDGE. COORDINATE WITH OWNER AND SOLAR PANEL MANUFACTURER FOR LOADING.



1 S1.0 FOOTING/FOUNDATION PLAN

1/8" = 1'-0"

CODE REVIEW

ALL WORK IS TO BE DONE AND LOADS TO BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:

- RHODE ISLAND STATE BUILDING CODE, 11th EDITION, SBC-1-2013
- IBC 2012
- ~~ASCE 7-10~~

GRAVITY LOADS:

ROOF:
GROUND SNOW LOAD = 35 psf
MIN. ROOF SNOW LOAD = 30 psf

SECOND FLOOR:
LL = 125 psf (Storage)
Coordinate with Owner

FIRST FLOOR:
~~LL = 250 psf~~

DEFLECTION CRITERIA:

SECOND FLOOR:
LIVE LOAD: L/480
TOTAL LOAD: L/360

ROOF:
LIVE LOAD: L/360
TOTAL LOAD: L/240

~~WIND PRESSURES~~

~~EXPOSURE: B~~
~~DESIGN WIND SPEED = 129 mph (Ultimate)~~
~~RISK CATEGORY: II~~

~~SEISMIC CRITERIA~~

~~SITE CLASS DEFINATION: D~~

~~MAPPED SPECTRAL ACCELERATIONS:~~
~~Ss = 0.175~~
~~S1 = 0.063~~

Specification Notes:

Concrete:

1. All concrete work is to conform to the current edition of the ACI Building Code Requirements for Reinforced Concrete (ACI 318).
2. Preinstallation Conference: Conduct conference at Project Site. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete material. The following representatives are to attend the conference:

   Contractor's superintendent
   Independent testing agency (responsible for concrete testing)
   Owner's representative
   Project Architect/Engineer
   Concrete subcontractor

   Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold and hot weather concreting procedures, curing procedures, construction contraction and isolation joints, and concrete protection.
3. Concrete shall be normal weight with with a minimum compressive strength of 3000 psi for footings and foundation walls.
4. All reinforcing bars to be ASTM A615 Grade 60 steel.
5. Cure concrete by keeping moist for a minimum of 72 hours.
6. Submit one electronic copy of shop drawings showing layout, bar sizes, and bending details.

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

E N S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

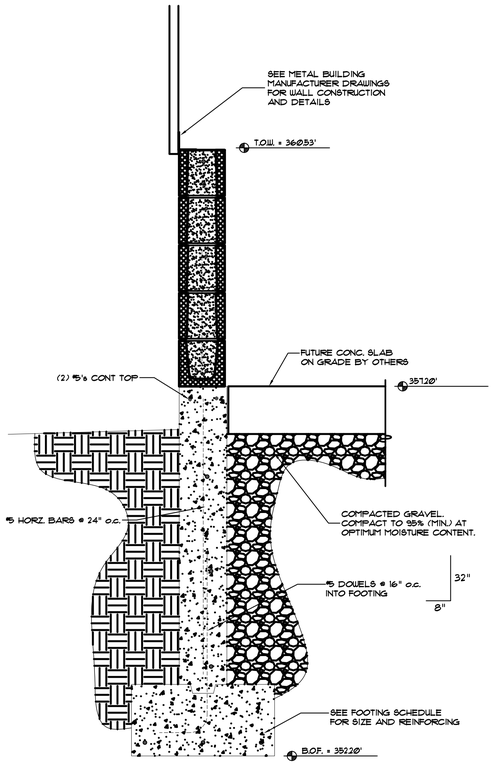
SHEET CONTENTS:
Footing/Foundation Plan

PROJECT # 4222

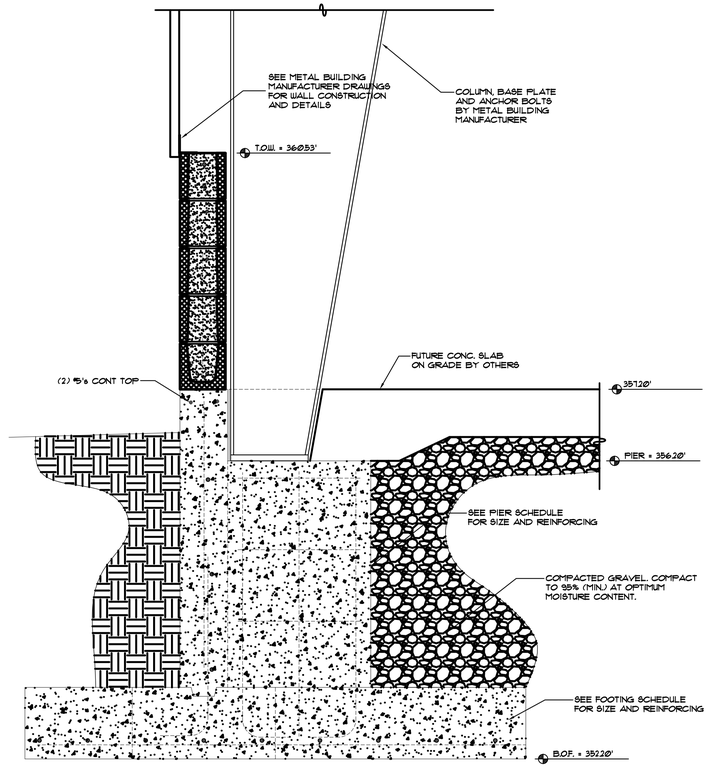
DATE: 08/07/2023
REVISED DATE:

ISSUED FOR BIDDING

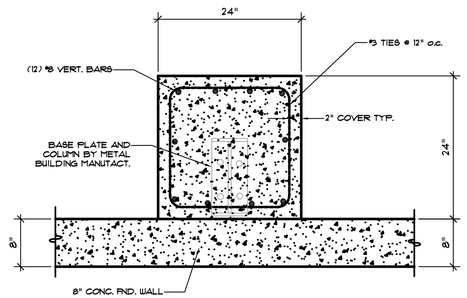
S1.0



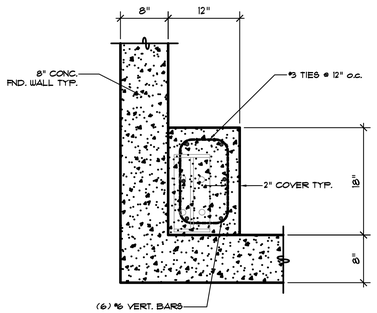
1 S2.Ø SECTION DETAIL
TYPICAL EXTERIOR WALL 1" = 1'-Ø"



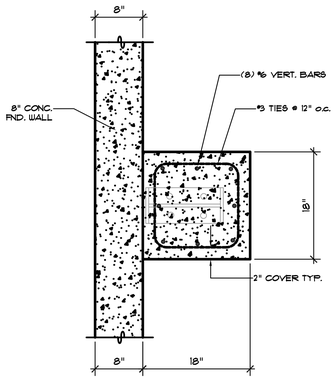
2 S2.Ø SECTION DETAIL
TYPICAL EXTERIOR PIER 1" = 1'-Ø"



P-1 PIER



P-3 PIER



P-3 PIER

4 S2.Ø FOUNDATION PIER PLAN DETAILS
1" = 1'-Ø"

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

E N S W

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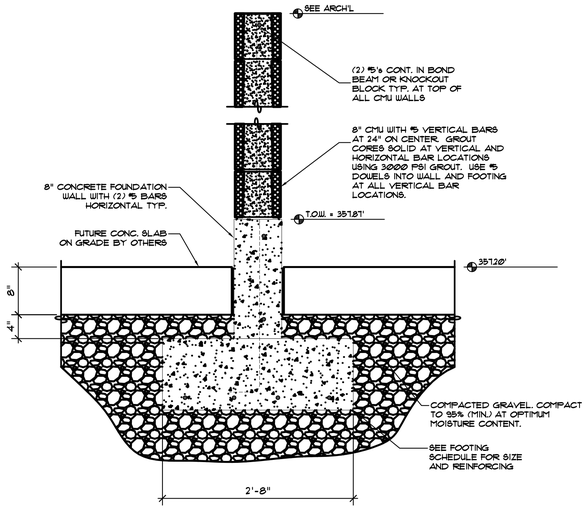
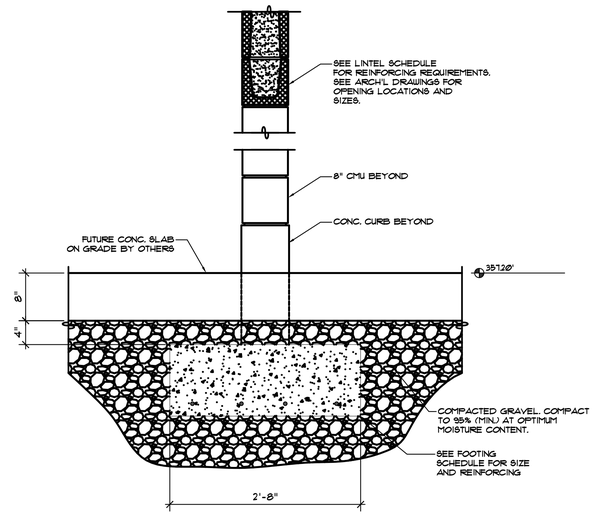
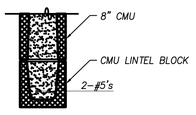
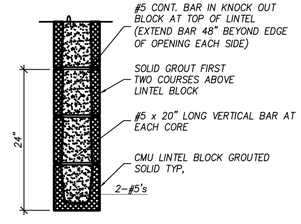


1 S2.1 SECTION DETAIL
TYP. CMU FOOTING 1" = 1'-0"



2 S2.1 SECTION DETAIL
TYP. CMU FOOTING AT DOOR 1" = 1'-0"

LINTEL SCHEDULE

TYPE	DETAIL	REMARKS
L-1 (UP TO 3'-4" MASONRY OPENING)		PROVIDE 8" BEARING AT EACH END OF LINTEL.
L-2 (UP TO 6'-4" MASONRY OPENING)		PROVIDE 16" BEARING AT EACH END OF LINTEL.

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

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N S
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SHEET CONTENTS:
Foundation Details

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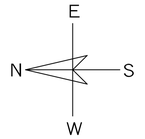
S2.1

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165



Proposed Design for:
Woonsocket Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02895

GENERAL NOTES:

1. ALL COMPONANTS OF PRE-ENGINEERED METAL BUILDING, INCLUDING BUT NOT LIMITED TO, THE BUILDING STEEL FRAMING, MEZZANINE STEEL FRAMING AND DECKING, METAL WALL PANELS, STANDING SEAM ROOF AND INSULATION, TO MEET ALL LOCAL BUILDING CODES AND TO BE STAMPED BY A CERTIFIED STRUCTURAL ENGINEER.
2. PROVIDE COORDINATION WITH ALL TRADES
3. VERIFY ALL DIMENSIONS IN FIELD. NOTIFY ARCHITECT IF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
4. PROTECT ALL FLOORS & FINISHES DURING CONSTRUCTION.

AREA CALCULATIONS

GARAGE SPACE = 3,138 SF
ADMIN. SPACE = 3,483 SF

TOTAL GROSS SF OF BLDG = 6,906 SF

WALL TYPES

1 NTS

A — EXTERIOR CMU WALL

8" CMU WALL PINNED TO FOUNDATION @ 48" O.C.
WALL HEIGHT TO BE 40" AFF.

A1 — EXTERIOR CMU WALL W/ FURRING PARTITION

8" CMU WALL PINNED TO FOUNDATION @ 48" O.C.
WALL HEIGHT TO BE 40" AFF.

W/ ¾" SHEATHING AND
W/ 3 ⅝" 25G STEEL STUDS @ 16" O.C. TO 9'-6" AFF. AND
W/ ⅝" GYPSUM BOARD ON ONE SIDE
(MOISTURE RESISTANT GYP. BD. AT WET WALLS)
W/ 3 ½" ACOUSTIC BATT INSULATION
BRACE WALLS TO METAL BUILDING GIRTS

B — TYP. INTERIOR WALL

3 ⅝" 25G STEEL STUDS @ 16" O.C. TO 9'-6" AFF.
5/8" GYPSUM BOARD EACH SIDE
(MOISTURE RESISTANT GYP. BD. AT WET WALLS)
W/ 3 ½" ACOUSTIC BATT INSULATION
BRACE WALLS TO STRUCTURE ABOVE
PROVIDE BLOCKING FOR FIXTURES & ACCESSORIES AS REQUIRED

C — 2 HR RATED CMU WALL

8" CMU WALL PINNED TO SLAB @ 48" O.C.
(SOLID GROUT CORE AT REINFORCING, RE: STRUCTURAL)
CLIP TO UNDERSIDE OF DECK ABOVE WITH SOFT JOINT
(FIRE CAULK AS REQ'D.)

2 HOUR RATED
UL # U306 RE: AS INDICATED ON PLANS

D — TYP. PLUMBING WALL

6" 25G STEEL STUDS @ 16" O.C. TO 9'-6" AFF.
5/8" GYPSUM BOARD EACH SIDE
(MOISTURE RESISTANT GYP. BD. AT WET WALLS)
W/ 3 ½" ACOUSTIC BATT INSULATION
BRACE WALLS TO STRUCTURE ABOVE
PROVIDE BLOCKING FOR FIXTURES & ACCESSORIES AS REQUIRED

ISSUED FOR BIDDING

SHEET CONTENTS:
Proposed Floor Plan

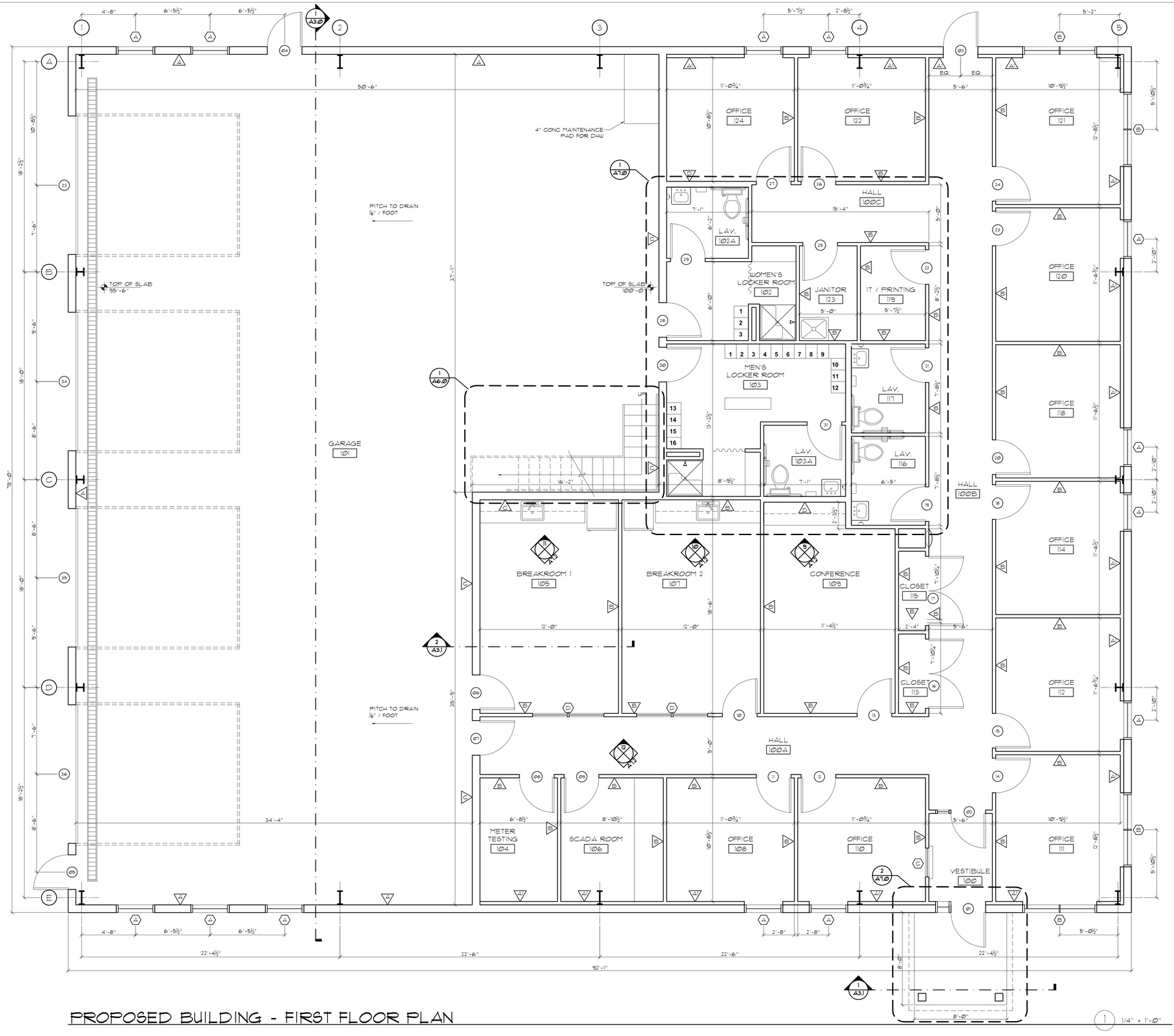
PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

G1.0

GENERAL NOTES:

1. ALL DIMENSIONS TO THE FACE OF FRAMING/STUDS UNLESS OTHERWISE NOTED.
2. REFERENCE SCHEDULE SHEET FOR DOOR, WINDOW AND FINISH SCHEDULES.
3. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND REPORT ANY DISCREPANCIES TO ARCHITECT.
4. PROVIDE BLOCKING IN WALLS FOR ALL FIXTURES AND ACCESSORIES.
5. FLASH PATCH FLOOR AS NEEDED TO INSTALL FLOOR FINISHES.
6. DOORS SHALL BE MOUNTED 5" AWAY FROM ADJACENT WALL, UNLESS NOTED OTHERWISE OR SHOWN IN DIFFERENT LOCATION.



PROPOSED BUILDING - FIRST FLOOR PLAN

1/4" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
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E
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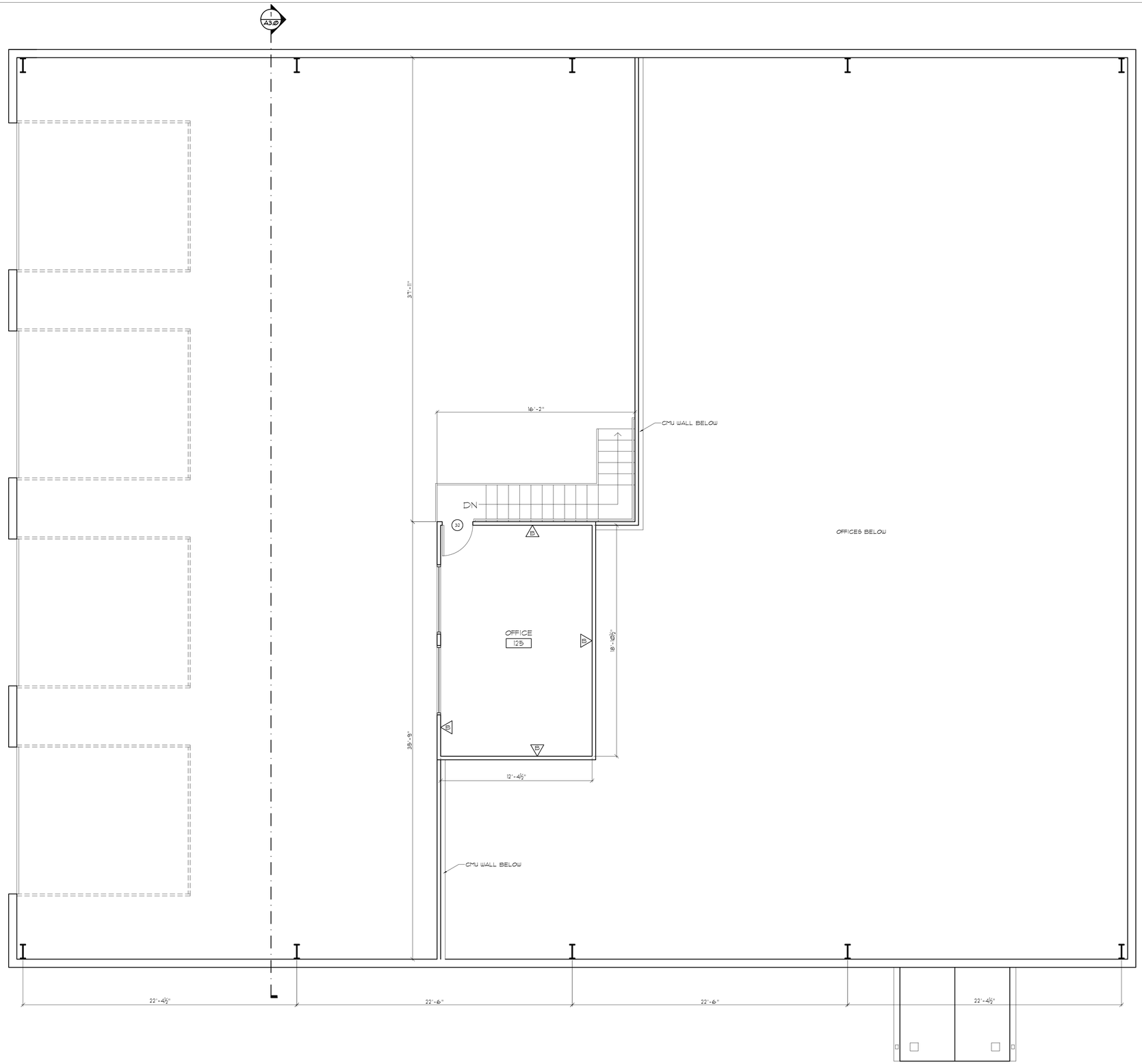
Proposed Design for:
Woonsocket
Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Proposed Floor Plan

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

A1.0



PROPOSED BUILDING - MEZZANINE PLAN

1 1/4" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
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Proposed Design for:
Woonsocket
Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Mzzanine Plan

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DATE: 08/07/2023
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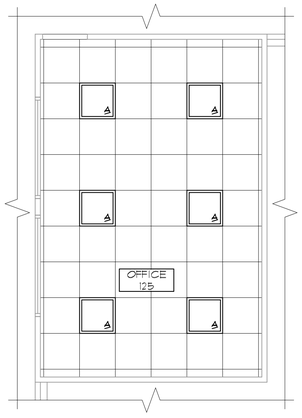
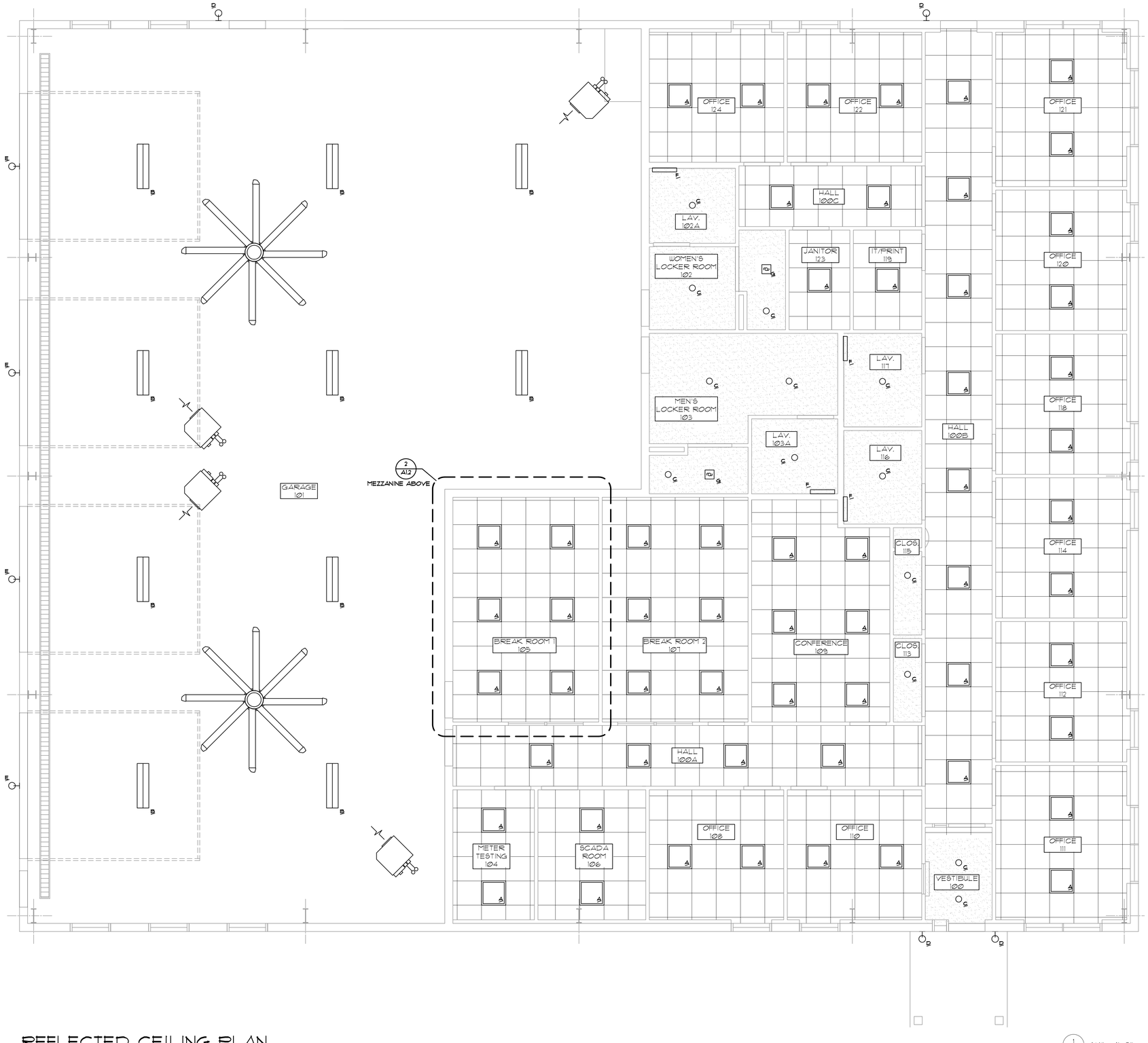
RCP LEGEND

- A — 2'x2' LITHONIA VTL LED TROFFER LIGHT
- B — LITHONIA COMPACT PRO LED HIGH BAY
- C — LITHONIA LDN6 LED RECESSED CAN LIGHT
- D — LITHONIA WDGE1 LED WALL MOUNT LIGHT
- E — LITHONIA WDGE3 LED WALL MOUNT LIGHT (HIGH INSTALL)
- F — 2' LITHONIA W WALL MOUNT BAR LIGHT
- G — NUTONE 763N COMBINATION VENTILATION FAN & LIGHT



MEZZANINE RCP — 2 — 1/4" = 1'-0"



REFLECTED CEILING PLAN — 1 — 1/4" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

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Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Reflected Ceiling Plan

PROJECT # 4222

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REVISED DATE:

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ROOF PLAN

1/4" = 1'-0"

ISSUED FOR BIDDING

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One Richmond Square
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Proposed Design for:
Woonsocket
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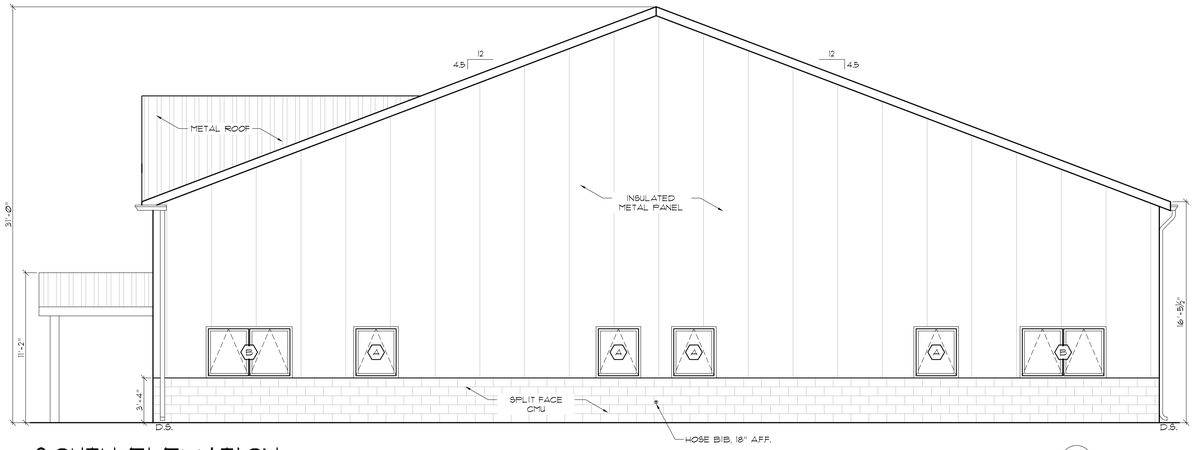
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Roof Plan

PROJECT # 4222

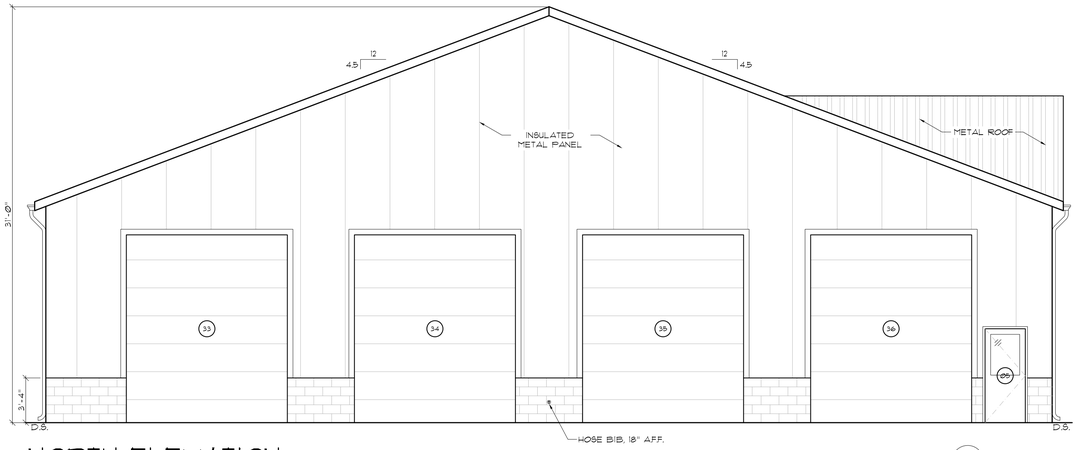
DATE: 08/07/2023
REVISED DATE:

A1.3



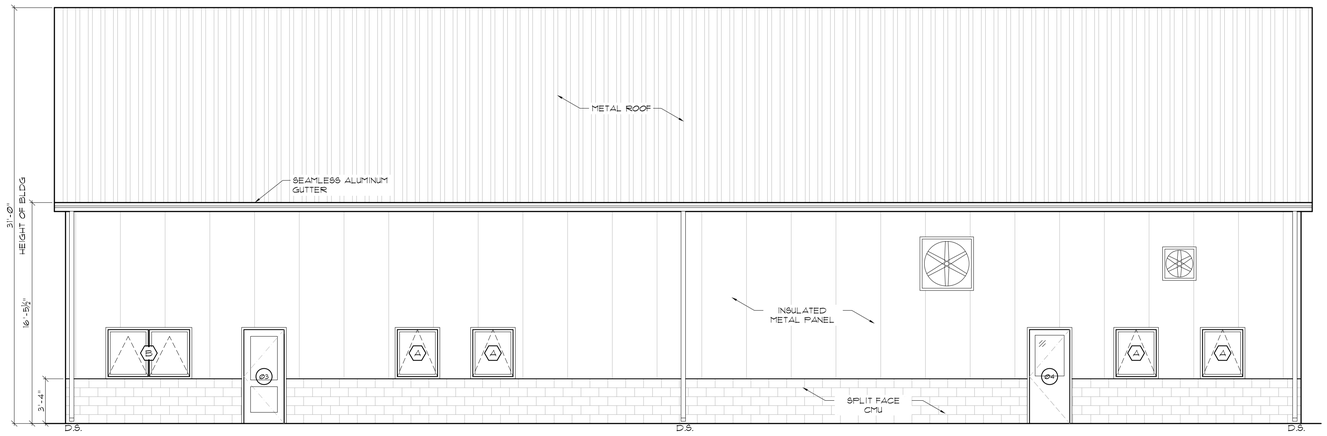
SOUTH ELEVATION

1 3/16" = 1'-0"



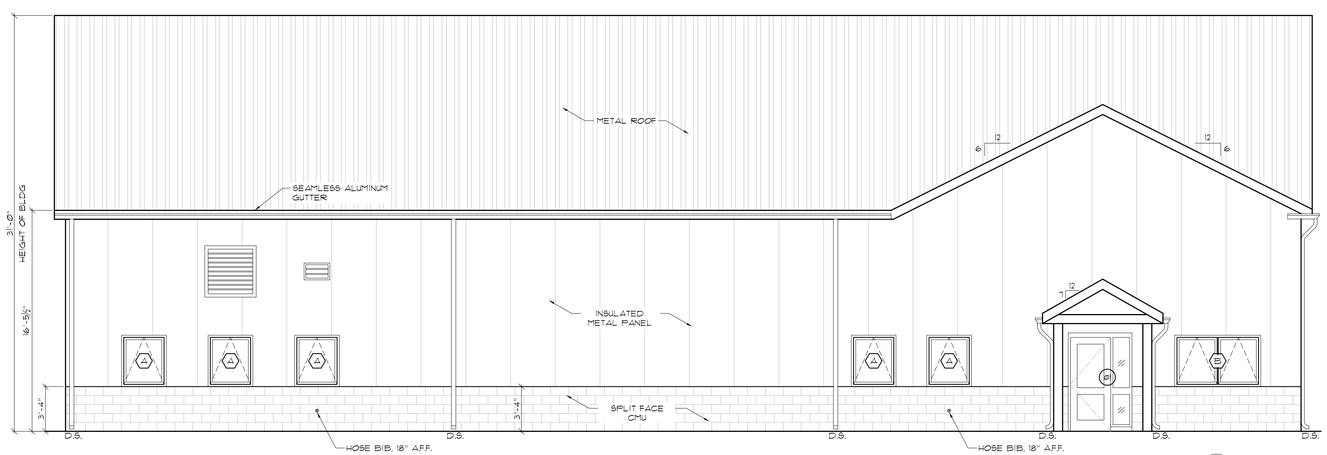
NORTH ELEVATION

2 3/16" = 1'-0"



EAST ELEVATION

3 3/16" = 1'-0"



WEST ELEVATION

4 3/16" = 1'-0"

ISSUED FOR BIDDING

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One Richmond Square
Providence, RI 02906
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Proposed Design for:
Woonsocket Water Division
New Garage and Offices

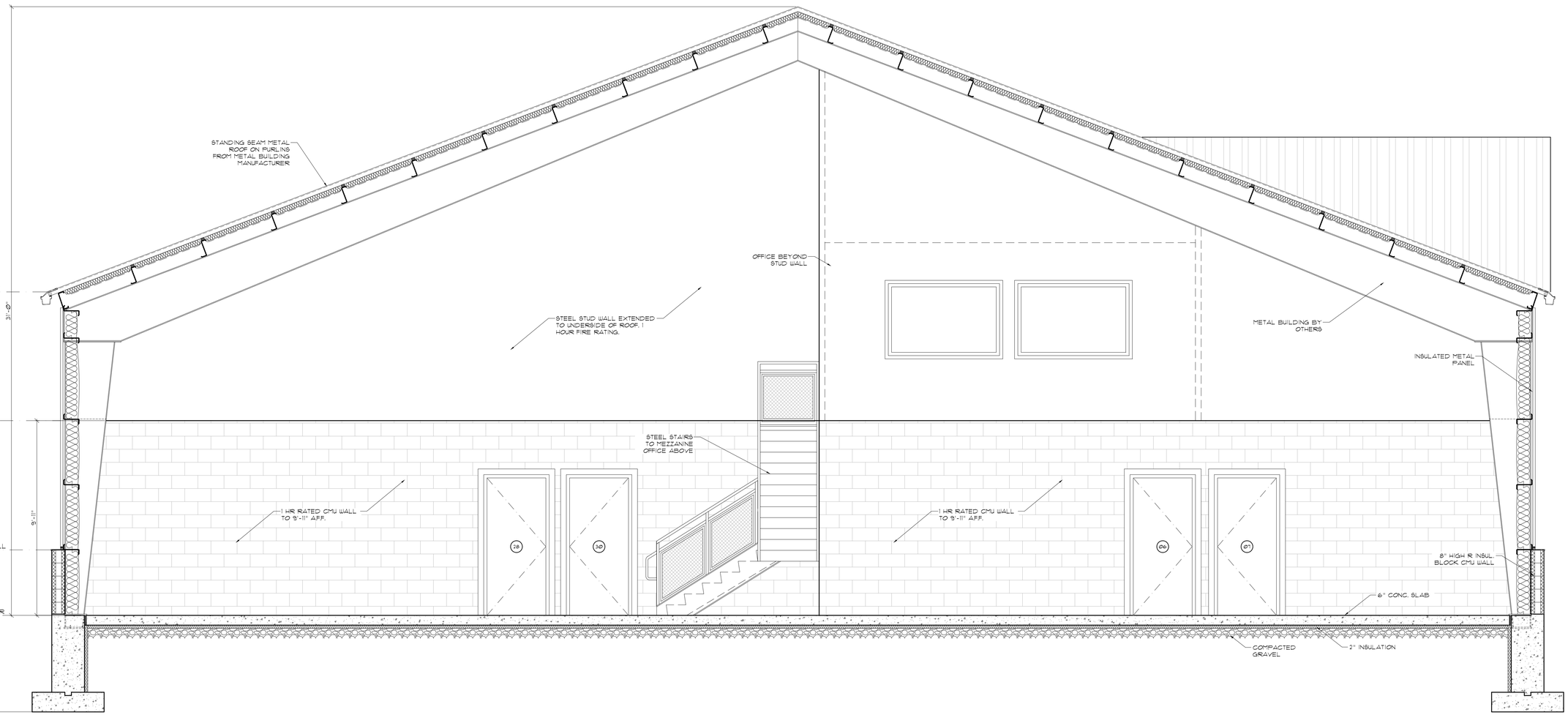
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Building Elevations

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

A2.0



BUILDING SECTION

1 3/8" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
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Proposed Design for:
Woonsocket Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Building Section

PROJECT # 4222

DATE: 08/07/2023
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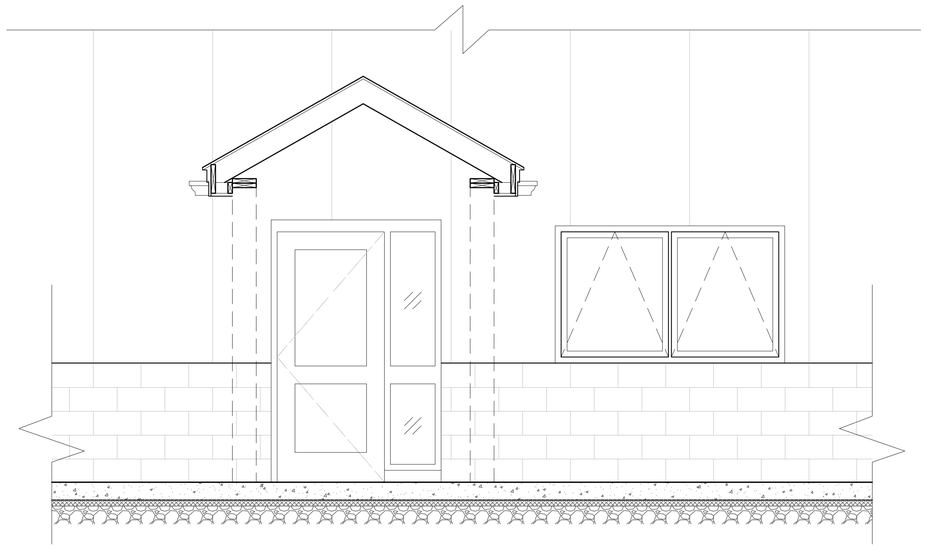
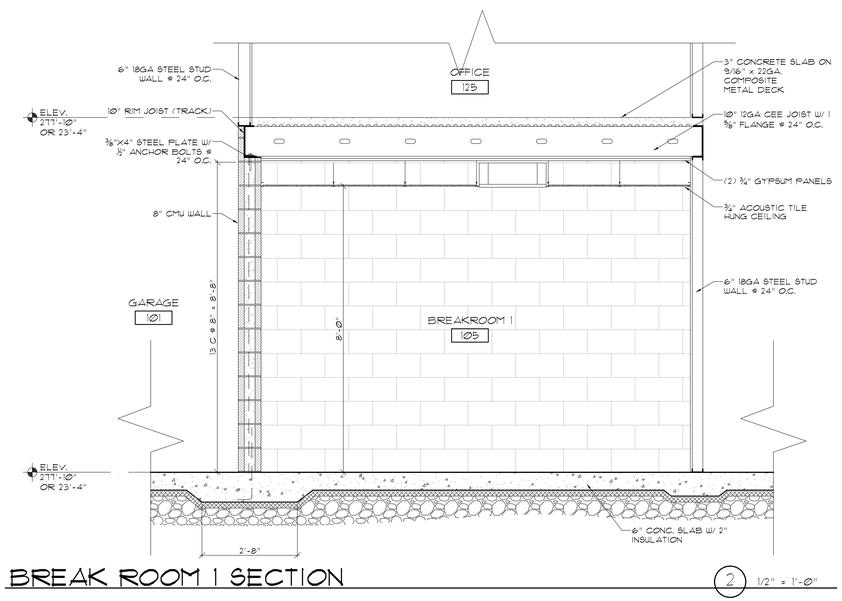
A3.0



ENTRY CANOPY SECTION

1 1/2" = 1'-0"



BREAK ROOM 1 SECTION

2 1/2" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

N E S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Sections Details

PROJECT # 4222

DATE: 08/07/2023
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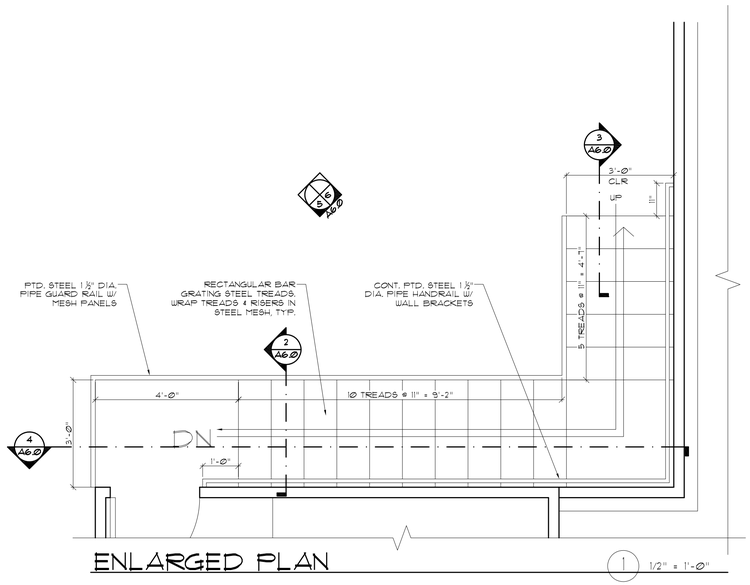
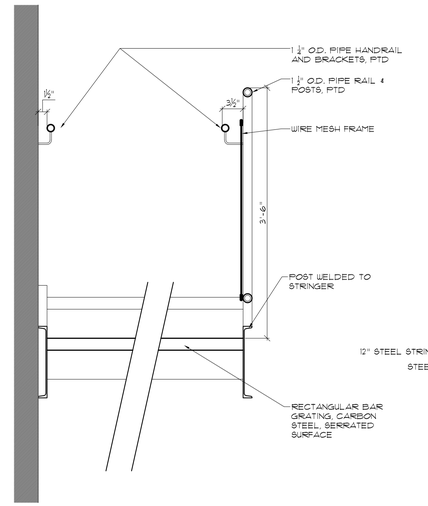
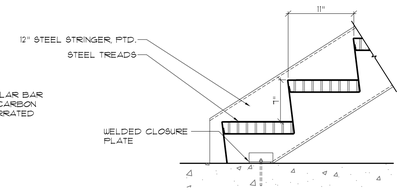
A3.1



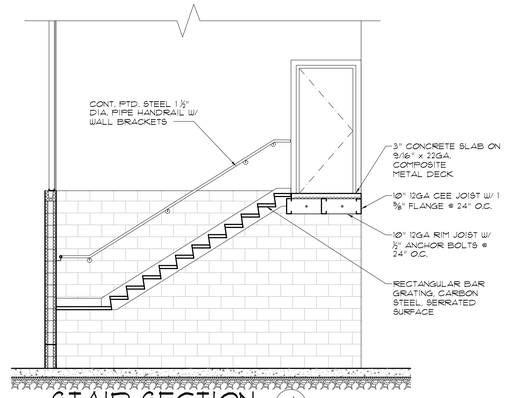
ENLARGED PLAN 1 1/2" = 1'-0"



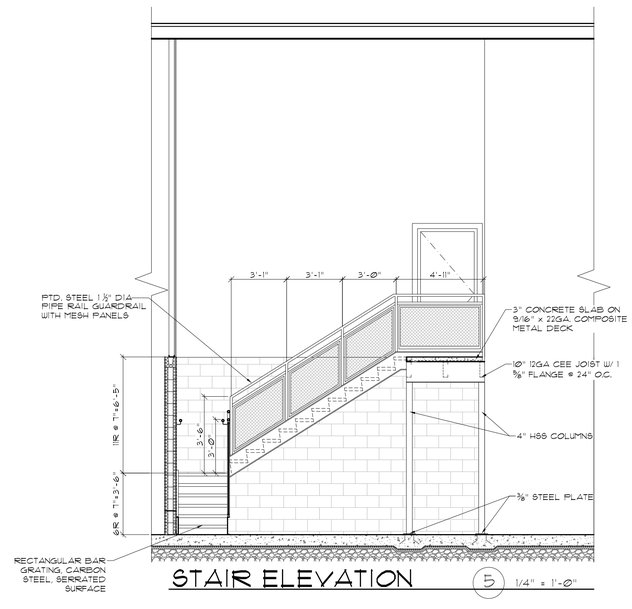
STAIR DETAIL 2 1" = 1'-0"



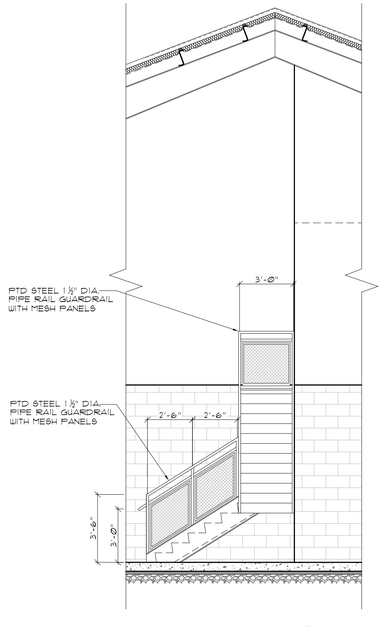
STAIR DETAIL 3 1" = 1'-0"



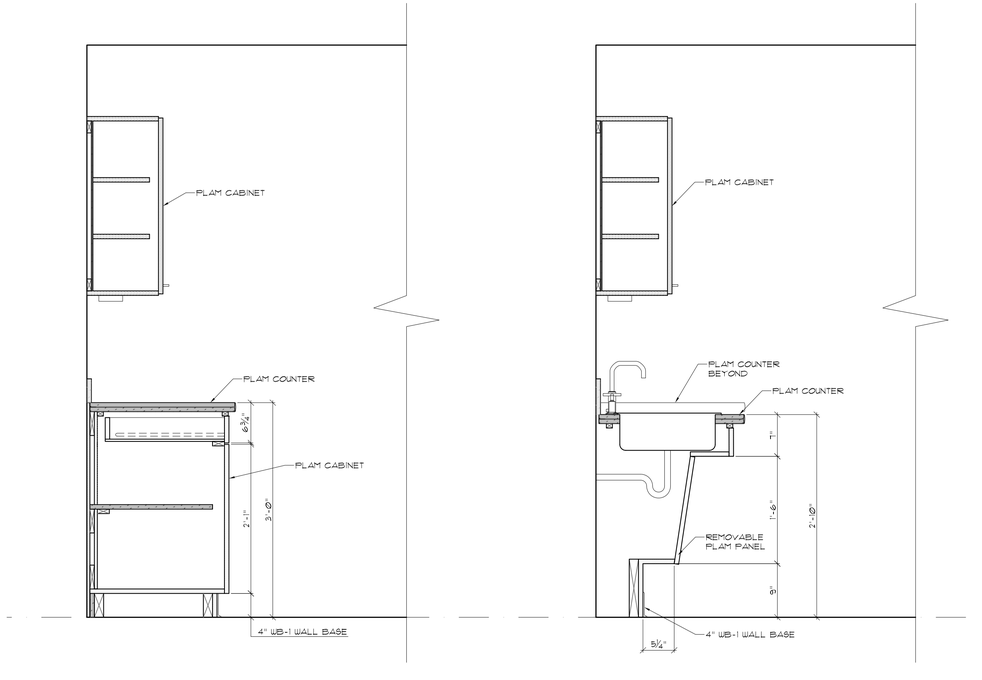
STAIR SECTION 4 1/4" = 1'-0"



STAIR ELEVATION 5 1/4" = 1'-0"



STAIR ELEVATION 6 1/4" = 1'-0"



CASEWORK DETAILS 7 1" = 1'-0" 8

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One Richmond Square
Providence, RI 02906
401 · 861 · 7139
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Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Details

PROJECT # 4222

DATE: 08/07/2023
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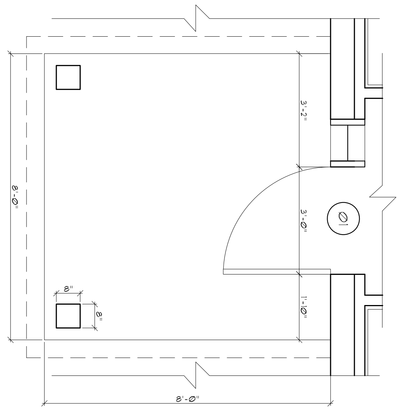
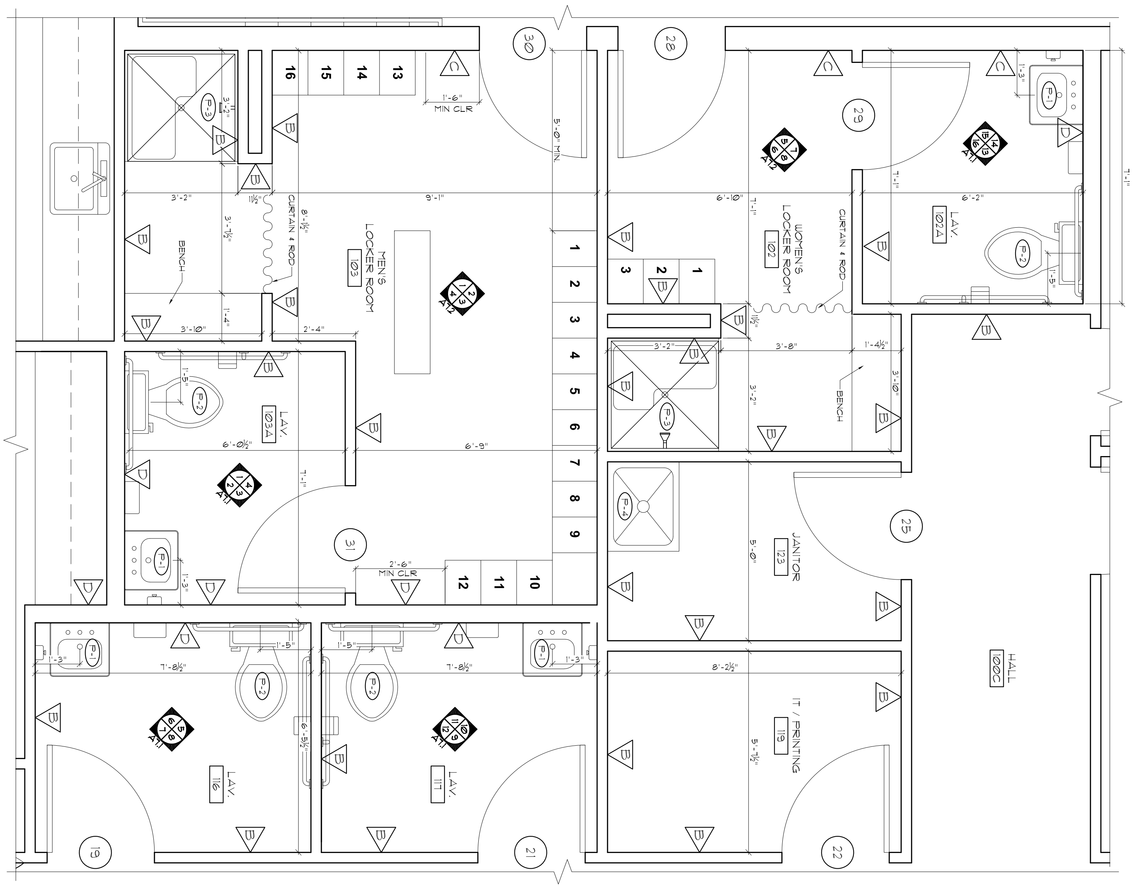
ENTRY CANOPY (2) 1/2" = 1'-0"



ENLARGED LOCKER ROOM / RESTROOM PLAN (1) 1/2" = 1'-0"



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DATE: 08/07/2023
REVISED DATE:

PROJECT # 4222

SHEET CONTENTS:
Enlarged Plans

Proposed Design for:
Woonsocket Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02895

N W E S

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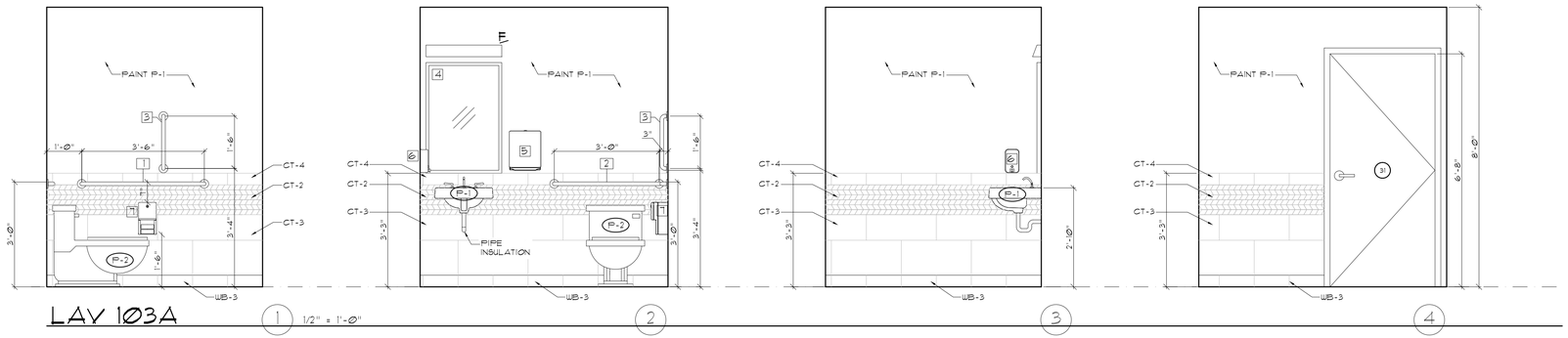
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

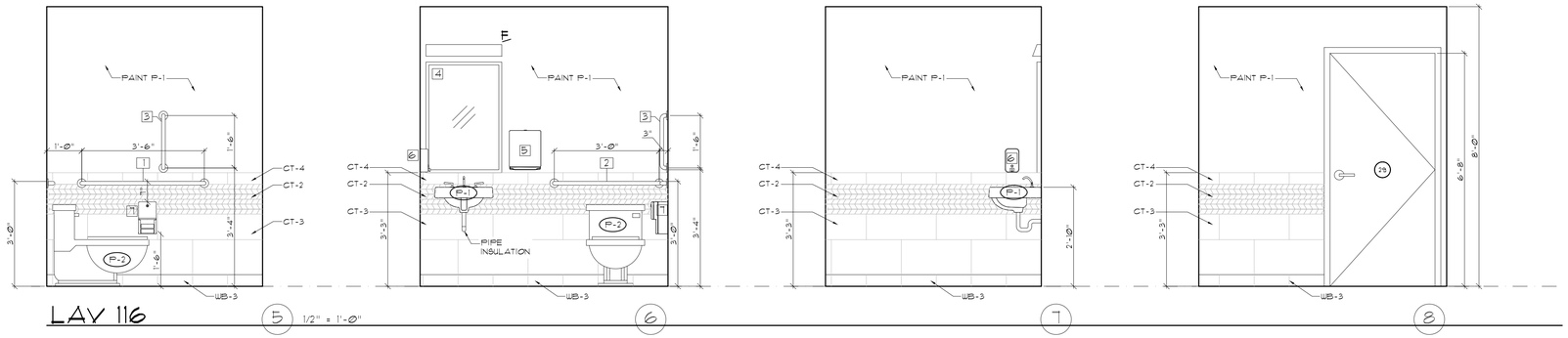
ACCESSORY SCHEDULE

KEY	TYPE	MANUF.	MODEL #	SIZE (W X H)	COLOR	REMARKS
1	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	42" LONG	N/A	MOUNT @ 33" - 36" ABOVE FLOOR TO BOTTOM OF BAR
2	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	36" LONG	N/A	MOUNT @ 33" - 36" ABOVE FLOOR TO BOTTOM OF BAR
3	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	18" VERTICAL	N/A	MOUNT @ 39" - 41" ABOVE FLOOR TO BOTTOM OF BAR
4	MIRROR	FRAMED		24" X 36"		MOUNT @ 40" MAX ABOVE FLOOR TO BOTTOM OF REFLECTIVE SURFACE
5	ELECTRIC HAND DRYER	EXCEL DRYER	XL-BW-ECO		WHITE	MOUNT @ 48" MAX ABOVE FLOOR TO BOTTOM OF DRYER
6	SOAP DISPENSER					MOUNT @ 48" MAX ABOVE FLOOR TO BOTTOM OF DISPENSER LEVER
7	TOILET PAPER HOLDER	OLYMPIA	TMT032		CHROME	MOUNT @ 15" MIN ABOVE FLOOR
8	SHOWER ROD	OLYMPIA	21Ø2-5PS			MOUNT @ 74" ABOVE FLOOR
9	ROBE HOOK	OLYMPIA	TMT033		CHROME	MOUNT @ 60" ABOVE FLOOR, MOUNT @ 48" MAX ABOVE FLOOR @ ADA UNITS



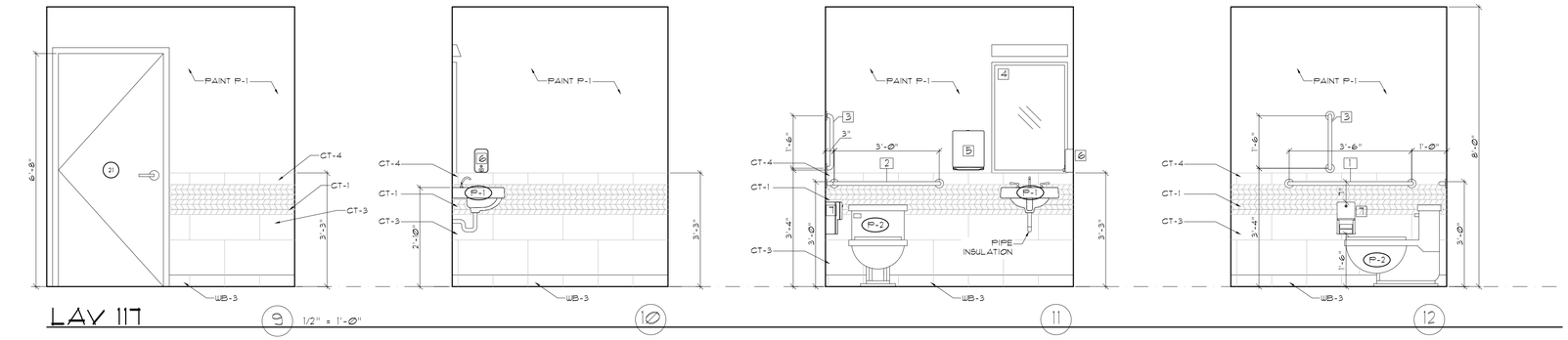
LAV 103A

1 1/2" = 1'-Ø"



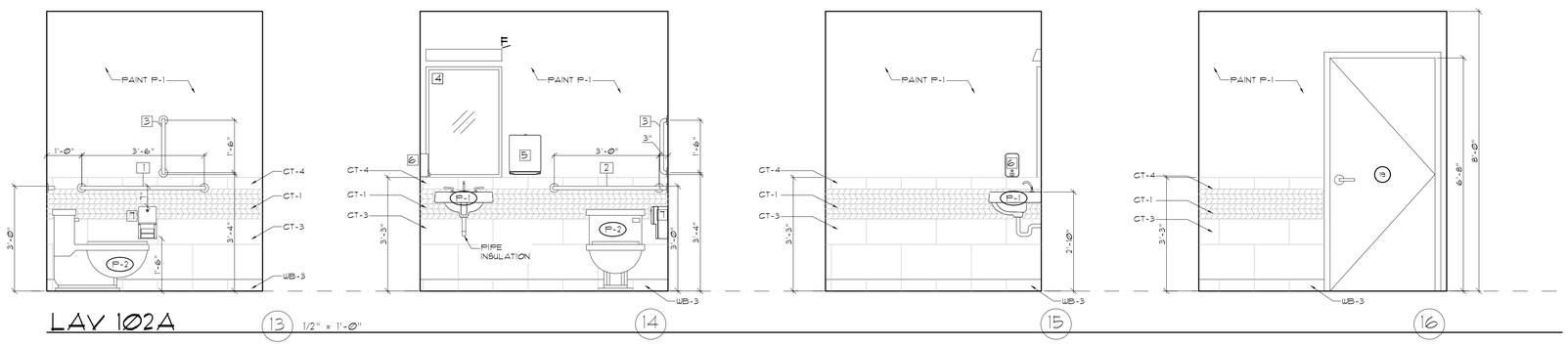
LAV 116

5 1/2" = 1'-Ø"



LAV 117

9 1/2" = 1'-Ø"



LAV 102A

13 1/2" = 1'-Ø"

ISSUED FOR BIDDING

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One Richmond Square
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Proposed Design for:
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New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Interior Elevations

PROJECT # 4222

DATE: 08/07/2023
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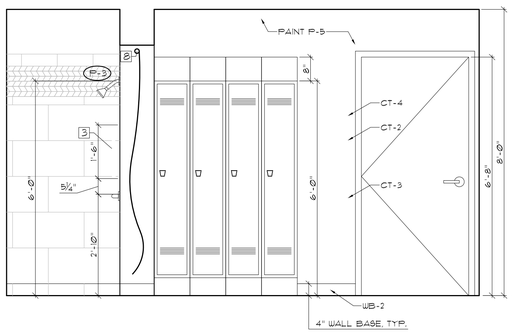
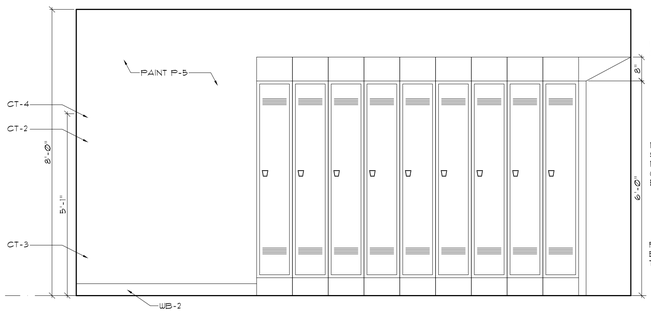
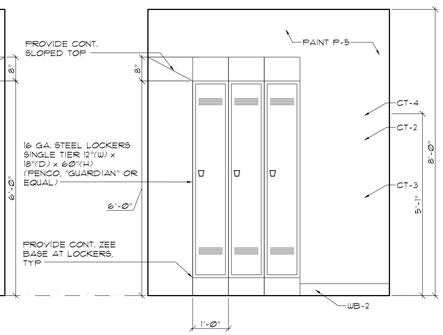
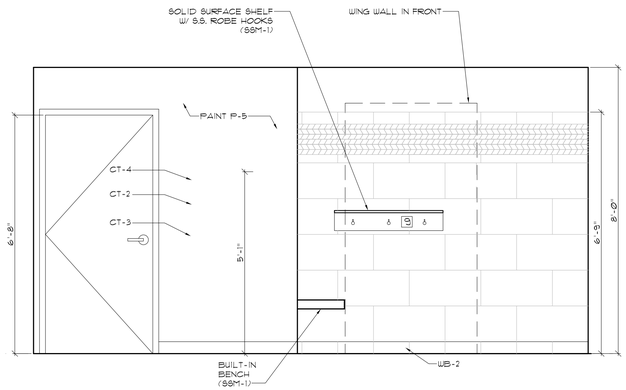
ACCESSORY SCHEDULE

KEY	TYPE	MANUF.	MODEL #	SIZE (W X H)	COLOR	REMARKS
1	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	42" LONG	N/A	MOUNT @ 33" - 36" ABOVE FLOOR TO BOTTOM OF BAR
2	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	36" LONG	N/A	MOUNT @ 33" - 36" ABOVE FLOOR TO BOTTOM OF BAR
3	GRAB BAR	BOBRICK OR EQUAL	B-5806.99	18" VERTICAL	N/A	MOUNT @ 39" - 41" ABOVE FLOOR TO BOTTOM OF BAR
4	MIRROR	FRAMED		24" X 36"		MOUNT @ 40" MAX ABOVE FLOOR TO BOTTOM OF REFLECTIVE SURFACE
5	ELECTRIC HAND DRYER	EXCEL DRYER	XL-BW-ECO		WHITE	MOUNT @ 48" MAX ABOVE FLOOR TO BOTTOM OF DRYER
6	SOAP DISPENSER					MOUNT @ 48" MAX ABOVE FLOOR TO BOTTOM OF DISPENSER LEVER
7	TOILET PAPER HOLDER	OLYMPIA	TMT032		CHROME	MOUNT @ 15" MIN ABOVE FLOOR
	SHOWER ROD	OLYMPIA	2107-5PS			MOUNT @ 74" ABOVE FLOOR
	ROBE HOOK	OLYMPIA	TMT033		CHROME	MOUNT @ 60" ABOVE FLOOR, MOUNT @ 48" MAX ABOVE FLOOR @ ADA UNITS

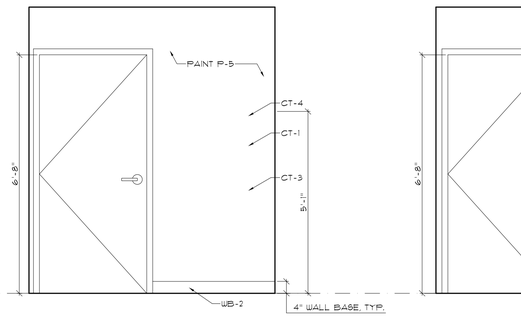


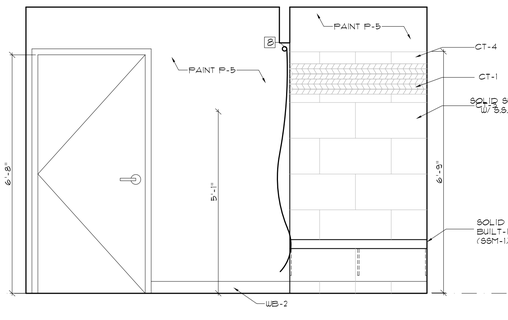


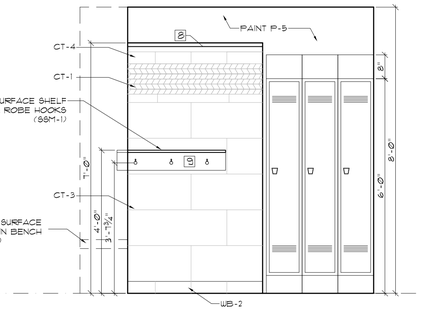


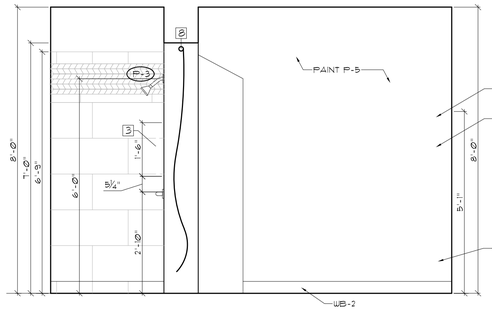


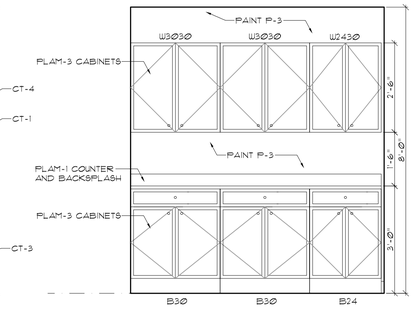
MEN'S LOCKER ROOM 1 1/2" = 1'-0" 2 3 4



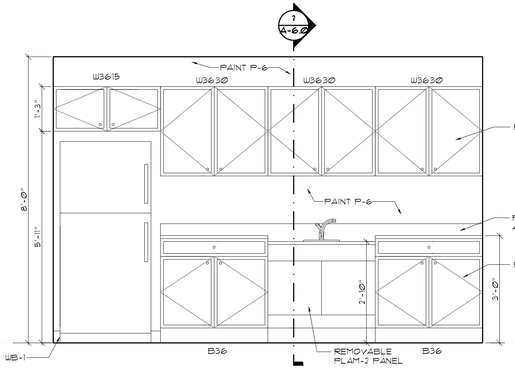


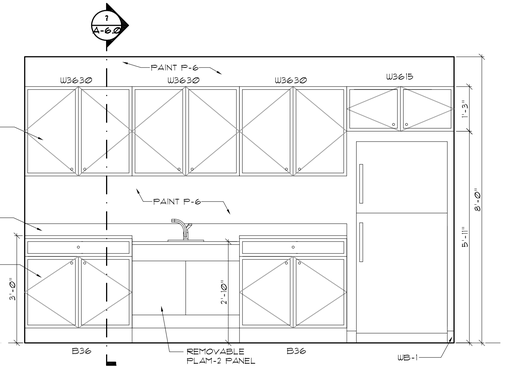


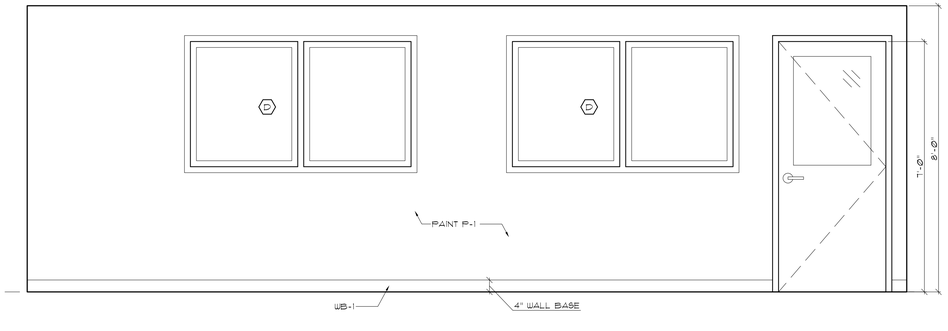




WOMEN'S LOCKER ROOM 5 1/2" = 1'-0" 6 7 8 CONFERENCE 9 1/2" = 1'-0"







BREAK 2 10 1/2" = 1'-0" BREAK 1 11 1/2" = 1'-0" HALL 100A 12 1/2" = 1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
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E N S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Interior Elevations

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

A7.2

FINISH SCHEDULE

LOCATION	ROOM #	FLOORING	WALLS				CEILING	BASE	REMARKS
			NORTH	EAST	SOUTH	WEST			
ENTRY VESTIBULE	100	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
HALL	100A-100C	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
GARAGE	101	SEALED CONCRETE	BY OWNER	BY OWNER	BY OWNER	BY OWNER	N/A	N/A	
WOMEN'S LOCKERS	102	EXP-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
WOMEN'S ADA WC	102A	EXP-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
MEN'S LOCKERS	103	EXP-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
MEN'S ADA WC	103A	EXP-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
METER TESTING	104	SEALED CONCRETE	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
BREAK 1	105	LVT-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
SCADA	106	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
BREAK 2	107	LVT-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 1	108	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
CONFERENCE	109	LVP-1	P-1	P-6	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 2	110	LVP-1	P-1	P-1	P-1	P-3	ACT-1	WB-1	P-2 TRIM
OFFICE 3	111	LVP-1	P-1	P-1	P-1	P-6	ACT-1	WB-1	P-2 TRIM
OFFICE 4	112	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
CLOSET / FILES	113	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 5	114	LVP-1	P-1	P-1	P-6	P-1	ACT-1	WB-1	P-2 TRIM
CLOSET / FILES	115	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
BATHROOM	116	PT-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-3	P-2 TRIM
BATHROOM	117	PT-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-3	P-2 TRIM
OFFICE 6	118	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
IT / PRINTING	119	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 7	120	LVP-1	P-1	P-1	P-6	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 8	121	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 9	122	LVP-1	P-1	P-6	P-1	P-1	ACT-1	WB-1	P-2 TRIM
JANITOR	123	SEALED CONCRETE	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 10	124	LVP-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
MEZZANINE OFFICE	125	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM

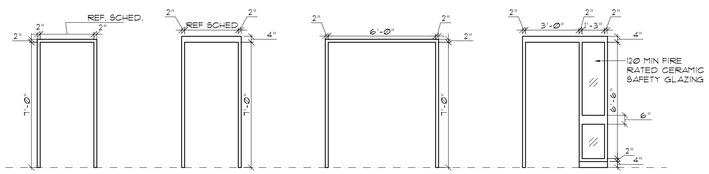
WINDOW SCHEDULE

MARK	LOCATION	TYPE	SIZE	FRAME	GLAZING	COLOR	REMARKS
A	EXT	AWNING	36"X42"	ALUM FRAME, THERMALLY BROKEN			
B	EXT	AWNING	73"X42"	ALUM FRAME, THERMALLY BROKEN			
C	INT	PICTURE	36"X42"	2" HM			
D	INT	PICTURE	73"X42"	2" HM			

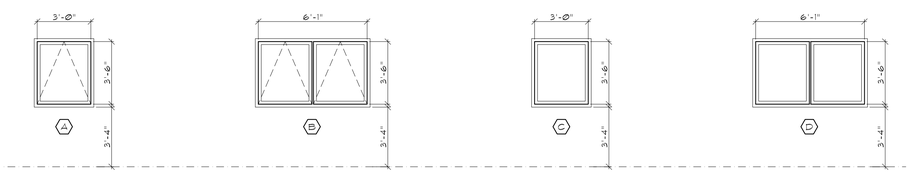
DOOR SCHEDULE

KEY	LOCATION	ROOM #	TYPE	SIZE (W x H)	MATERIAL	RATING	FRAME TYPE	FRAME MATERIAL	FRAME RATING	HARDWARE	REMARKS
FIRST FLOOR											
01	ENTRY VESTIBULE	100	D	3'-0" X 7'-0"	ALUM.		4	ALUM.		PANIC EXIT HARDWARE W/ LEVER LOCKSET, CLOSER	
02	HALL	100B	D	3'-0" X 7'-0"	ALUM.		4	ALUM.		PANIC EXIT HARDWARE W/ LEVER LOCKSET, CLOSER	
03	HALL	100B	B	3'-0" X 7'-0"	H.M. (PTD; PT-9)		2	(PT-11)		PANIC EXIT HARDWARE W/ LEVER LOCKSET, CLOSER	
04	GARAGE	101	B	3'-0" X 7'-0"	H.M. (PTD; PT-9)		2	(PT-11)		PANIC EXIT HARDWARE W/ LEVER LOCKSET, CLOSER	
05	GARAGE	101	B	3'-0" X 7'-0"	H.M. (PTD; PT-9)		2	(PT-11)		PANIC EXIT HARDWARE W/ LEVER LOCKSET, CLOSER	
06	BREAK 1	105	A	3'-0" X 7'-0"	H.M. (PTD; PT-9)	1 HOUR	2	(PT-11)	1 HOUR	LEVER LOCKSET	
07	HALL	100A	B	3'-0" X 7'-0"	H.M. (PTD; PT-9)	1 HOUR	2	(PT-11)	1 HOUR	LEVER LOCKSET	
08	METER TESTING	104	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
09	SCADA	106	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
10	BREAK 2	107	A	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
11	OFFICE 1	108	B	3'-0" X 7'-0"	WOOD		2			LEVER LOCKSET	
12	OFFICE 2	110	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
13	CONFERENCE	109	A	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
14	OFFICE 3	111	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
15	OFFICE 4	112	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
16	CLOSET / FILES	113	C	6'-0" X 7'-0"	WOOD		3			LEVER LOCKSET	
17	CLOSET / FILES	115	C	6'-0" X 7'-0"	WOOD		3			LEVER LOCKSET	
18	OFFICE 5	114	B	3'-0" X 7'-0"	WOOD					LEVER LOCKSET	
19	BATHROOM	116	B	3'-0" X 7'-0"	WOOD		1	HOLLOW METAL		PRIVACY LEVER	
20	OFFICE 6	118	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
21	BATHROOM	117	B	3'-0" X 7'-0"	WOOD		1	HOLLOW METAL		PRIVACY LEVER	
22	IT / PRINTING	119	A	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
23	OFFICE 7	120	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
24	OFFICE 8	121	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
25	JANITOR	123	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
26	OFFICE 9	122	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
27	OFFICE 10	124	B	3'-0" X 7'-0"	WOOD		1			LEVER LOCKSET	
28	WOMEN'S LOCKERS	102	B	3'-0" X 7'-0"	WOOD	1 HOUR	2	(PT-11)	1 HOUR	PUSH/PULL HANDLE W/ 10" KICKPLATE	
29	WOMEN'S ADA WC	102A	B	3'-0" X 7'-0"	WOOD		1	HOLLOW METAL		PRIVACY LEVER	
30	MEN'S LOCKERS	103	B	3'-0" X 7'-0"	WOOD	1 HOUR	2	(PT-11)	1 HOUR	PUSH/PULL HANDLE W/ 10" KICKPLATE	
31	MEN'S ADA WC	103A	B	3'-0" X 7'-0"	WOOD		1	HOLLOW METAL		PRIVACY LEVER	
32	MEZZANINE OFFICE	200	B	3'-0" X 7'-0"	WOOD		2	HOLLOW METAL		LEVER LOCKSET	
33	GARAGE (SECTIONAL OVERHEAD)	101	E	12'-0" X 14'-0"	INSULATED STL.					ELECTRIC DOOR OPERATOR W/PUSHBOTTON CONTROL AND PHOTO EYE SENSOR	18" MIN HEADROOM CLEARANCE
34	GARAGE (SECTIONAL OVERHEAD)	101	E	12'-0" X 14'-0"	INSULATED STL.					ELECTRIC DOOR OPERATOR W/PUSHBOTTON CONTROL AND PHOTO EYE SENSOR	18" MIN HEADROOM CLEARANCE
35	GARAGE (SECTIONAL OVERHEAD)	101	E	12'-0" X 14'-0"	INSULATED STL.					ELECTRIC DOOR OPERATOR W/PUSHBOTTON CONTROL AND PHOTO EYE SENSOR	18" MIN HEADROOM CLEARANCE
36	GARAGE (SECTIONAL OVERHEAD)	101	E	12'-0" X 14'-0"	INSULATED STL.					ELECTRIC DOOR OPERATOR W/PUSHBOTTON CONTROL AND PHOTO EYE SENSOR	18" MIN HEADROOM CLEARANCE

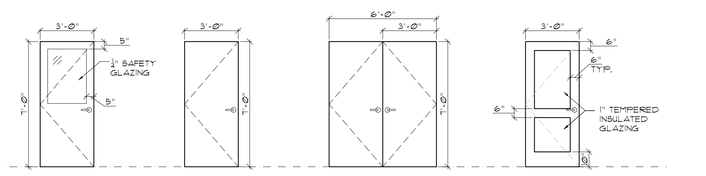
NOTES:
1. CONTRACTOR TO VERIFY ALL MEASUREMENTS IN FIELD. NOTIFY ARCHITECT OF ANY CONFLICTS.
2. PROVIDE DOOR STOPS & SILENCERS AT ALL DOORS.
3. CAULK FRAMES



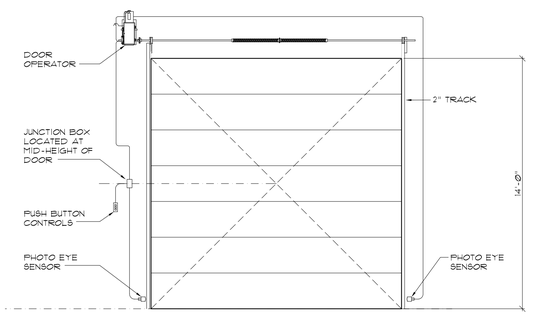
FRAME TYPES 1 NTS



WINDOW TYPES 3 NTS



DOOR TYPES 2 NTS



ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

E N S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Schedules

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

A8.0

FINISH SCHEDULE

LOCATION	ROOM #	FLOORING	WALLS				CEILING	BASE	REMARKS
			NORTH	EAST	SOUTH	WEST			
ENTRY VESTIBULE	100	LVP-1	P-1	P-1	P-1	P-1	PAINTED P-7 GYPSUM	WB-1	P-2 TRIM
HALL	100A-100C	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
GARAGE	101	SEALED CONCRETE	BY OWNER	BY OWNER	BY OWNER	BY OWNER	N/A	N/A	
WOMEN'S LOCKERS	102	EXP-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
WOMEN'S ADA WC	102A	EXP-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
MEN'S LOCKERS	103	EXP-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
MEN'S ADA WC	103A	EXP-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-2	P-2 TRIM
METER TESTING	104	SEALED CONCRETE	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
BREAK 1	105	LVT-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
SCADA	106	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
BREAK 2	107	LVT-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 1	108	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
CONFERENCE	109	LVP-1	P-1	P-6	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 2	110	LVP-1	P-1	P-1	P-1	P-3	ACT-1	WB-1	P-2 TRIM
OFFICE 3	111	LVP-1	P-1	P-1	P-1	P-6	ACT-1	WB-1	P-2 TRIM
OFFICE 4	112	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
CLOSET / FILES	113	LVP-1	P-1	P-1	P-1	P-1	PAINTED P-7 GYPSUM	WB-1	P-2 TRIM
OFFICE 5	114	LVP-1	P-1	P-1	P-6	P-1	ACT-1	WB-1	P-2 TRIM
CLOSET / FILES	115	LVP-1	P-1	P-1	P-1	P-1	PAINTED P-7 GYPSUM	WB-1	P-2 TRIM
BATHROOM	116	PT-1	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	CT-3 AND CT-2 ACCENT BORDER, PAINT P-5 ABOVE	PAINTED P-7 GYPSUM	WB-3	P-2 TRIM
BATHROOM	117	PT-1	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	CT-3 AND CT-1 ACCENT BORDER, PAINTED P-4 ABOVE	PAINTED P-7 GYPSUM	WB-3	P-2 TRIM
OFFICE 6	118	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
IT / PRINTING	119	LVP-1	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 7	120	LVP-1	P-1	P-1	P-6	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 8	121	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 9	122	LVP-1	P-1	P-6	P-1	P-1	ACT-1	WB-1	P-2 TRIM
JANITOR	123	SEALED CONCRETE	P-1	P-1	P-1	P-1	ACT-1	WB-1	P-2 TRIM
OFFICE 10	124	LVP-1	P-1	P-3	P-1	P-1	ACT-1	WB-1	P-2 TRIM
MEZZANINE OFFICE	125	LVP-1	P-1	P-1	P-3	P-1	ACT-1	WB-1	P-2 TRIM

FINISH LIST

ACT-1 ACOUSTIC CEILING TILE
MANUFACTURER: CERTAINTEED
COLLECTION: SYMPHONY m
STYLE: NARROW REVEAL
SIZE: 24"x24" W/ 9/16" GRID

CT-1: CERAMIC ACCENT TILE (WOMEN'S BATHROOM AND LOCKER ROOM)
MANUFACTURER: DALTILE
COLLECTION: COLOR WHEEL RETRO
STYLE: 2"x3" CHEVRON MOSAIC
COLOR: 0169 WATERFALL / 0148 SPA
FINISH: SEMI-GLOSS
GROUT: MAPEI 11 SAHARA BEIGE

CT-2: CERAMIC ACCENT TILE (MEN'S BATHROOM AND LOCKER ROOM)
MANUFACTURER: DALTILE
COLLECTION: COLOR WHEEL RETRO
STYLE: 2"x3" CHEVRON MOSAIC
COLOR: 0169 WATERFALL / 1469 GALAXY
FINISH: SEMI-GLOSS
GROUT: MAPEI 11 SAHARA BEIGE

CT-3: CERAMIC TILE (BATHROOMS AND LOCKER ROOMS)
MANUFACTURER: DALTILE
COLLECTION: MULTITUDE
STYLE: WAVE
COLOR: MU16 ORIGAMI WHITE
SIZE: 12"x24"
GROUT: MAPEI 11 SAHARA BEIGE
INSTALLATION METHOD: STAGGERED (SEE ELEVATIONS)

CT-4: CERAMIC TILE(BATHROOMS AND LOCKER ROOMS)
MANUFACTURER: DALTILE
COLLECTION: COLOR WHEEL LINEAR
COLOR: 0190 ARTIC WHITE
SIZE: 4"x12"
FINISH: MATTE
GROUT: MAPEI 11 SAHARA BEIGE
INSTALLATION METHOD: STAGGERED (SEE ELEVATIONS)

EXP-1: EPOXY FLOOR (LOCKER ROOMS)
MANUFACTURER: SHERWIN WILLIAMS
COLLECTION: RESILFLOOR DECO QUARTZ BC23
COLOR: WINTER SKY
NOTES: 4" COVE BASE TO BE APPLIED (WB-2)

LVP-1: LUXURY VINYL PLANK (THROUGHOUT)
MANUFACTURER: PATCRAFT
COLLECTION: 14684V SPLITWOOD
COLOR: 00340 WEATHERED BRONZE
SIZE: 9"x60" AT 5mm THICK AND 20 MIL WEAR LAYER

LVT-1: LUXURY VINYL TILE (BREAK ROOMS)
MANUFACTURER: ALTRO FLOORING
COLLECTION: LAVENCIA LVT
COLOR: LAV16255 CORDOVA
SIZE: 12"x24" AT 3mm THICK AND 20 MIL WEAR LAYER

P-1: PAINT (GENERAL WALLS/HALLS)
MANUFACTURER: BENJAMIN MOORE
COLOR: AF-540 CONSTELLATION
FINISH: EGGSHELL
NOTE: SEMI-GLOSS FINISH AT WET AREAS AND KITCHENS

P-2: PAINT (TRIM THROUGHOUT)
MANUFACTURER: BENJAMIN MOORE
COLOR: AF-5 FROSTLINE
FINISH: SEMI-GLOSS

P-3: PAINT (ACCENT WALLS)
MANUFACTURER: BENJAMIN MOORE
COLOR: HC-176 ANNAPOLIS GRAY
FINISH: EGGSHELL
NOTE: SEMI-GLOSS AT WET AREAS AND KITCHENS

P-4: PAINT (WOMEN'S LOCKER ROOM)
MANUFACTURER: BENJAMIN MOORE
COLOR:AF-485 CRYSTALLINE
FINISH: SEMI-GLOSS

P-5 PAINT (MEN'S LOCKER ROOM)
MANUFACTURER: BENJAMIN MOORE
COLOR: AF-680 WISH
FINISH: SEMI-GLOSS

P-6: PAINT (ACCENT WALLS)
MANUFACTURER: BENJAMIN MOORE
COLOR: AF-545 SOLITUDE
FINISH: EGGSHELL
NOTE: SEMI-GLOSS AT WET AREAS

P-7: CEILING PAINT
MANUFACTURER: SHERWIN WILLIAMS
COLOR: CEILING WHITE

PLAM-1: LAMINATE COUNTERTOP
MANUFACTURER: FORMICA
COLOR: 6697-58 ARGENTO ROMANO
FINISH: MATTE TEXTURE

PLAM-2: LAMINATE CABINET (CONFERENCE ROOM)
MANUFACTURER: WILSONART TRACELESS
COLOR: 1515 NILE VELVET
FINISH: ULTRA MATTE

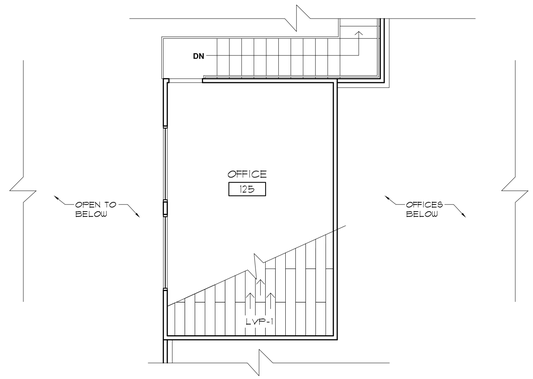
PLAM-3: LAMINATE CABINET (BREAK ROOMS)
MANUFACTURER: FORMICA
COLOR: 9484-NG OXIDIZED BEAMWOOD
FINISH: NATURAL GRAIN TEXTURE

PT-1: PORCELAIN TILE FLOOR (BATHROOMS)
MANUFACTURER: DALTILE
COLLECTION: ASSEMBLE
COLOR: A911 MAGISTRATE
SIZE: 12"x24"
GROUT: MAPEI 11 SAHARA BEIGE

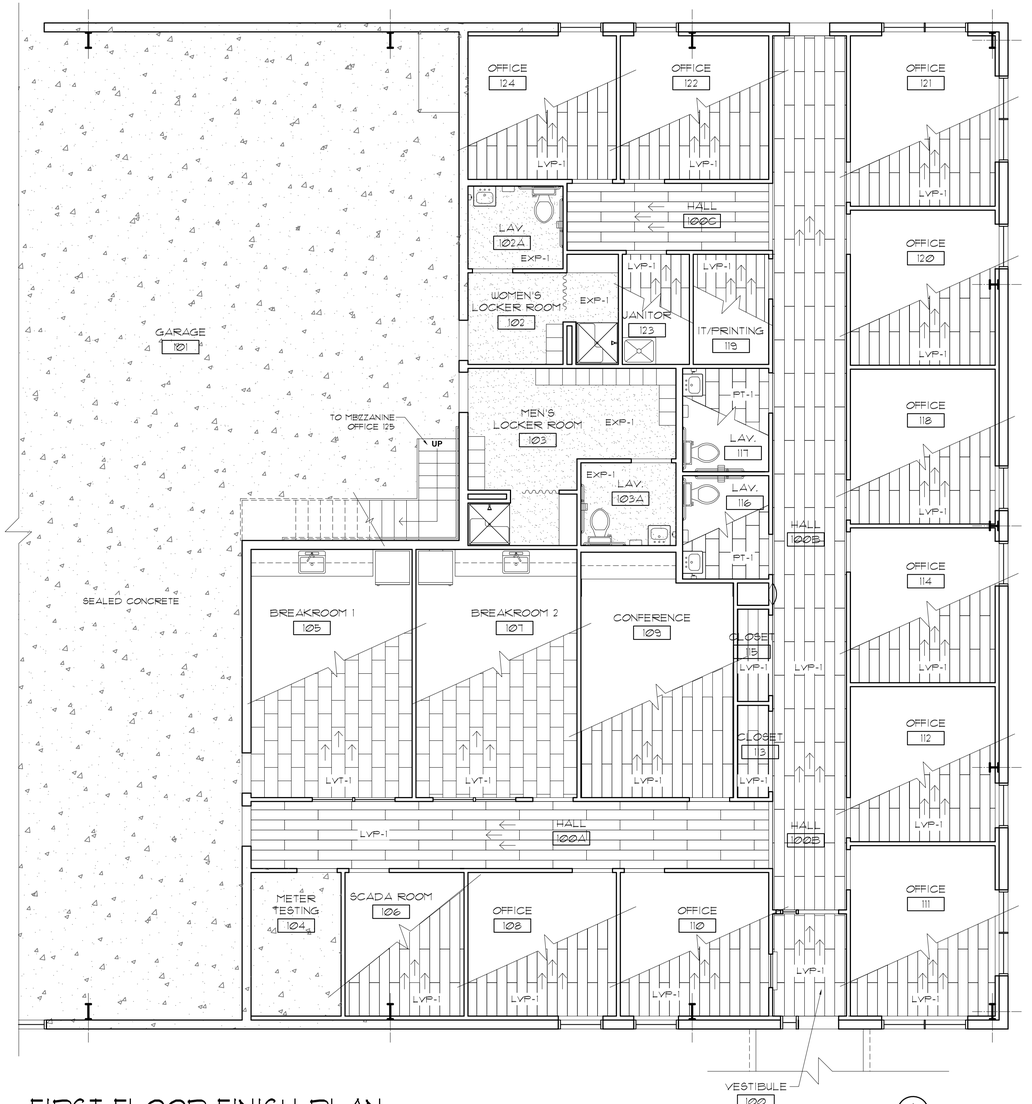
WB-1: VINYL COVE WALL BASE (THROUGHOUT)
MANUFACTURER: TARKETT JOHNSONITE
STYLE: TRADITIONAL 4" VINYL COVE BASE
COLOR: 283 TOAST
SIZE: 4" AT 1/8" GUAGE

WB-2: EPOXY 6" COVE WALL BASE (LOCKER ROOMS)
MANUFACTURER: SHERWIN WILLIAMS
COLLECTION: RESILFLOOR DECO QUARTZ BC23
COLOR: WINTER SKY

WB-3: CERAMIC COVE WALL BASE
MANUFACTURER: DALTILE
COLLECTION: COLOR WHEEL LINEAR
COLOR: X114 DESERT GRAY
SIZE: 4" x 12" 8440SMOD BULLNOSE
FINISH: MATTE
GROUT: MAPEI 11 SAHARA BEIGE



MEZZ. FINISH PLAN (2) 3/16" = 1'-0"



FIRST FLOOR FINISH PLAN (1) 3/16" = 1'-0"

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 · 861 · 7139
Fax: 401 · 861 · 7165

E N S W

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

SHEET CONTENTS:
Schedules Continued and Finish Plans

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

ISSUED FOR BIDDING

A8.1

PLUMBING SYMBOL LEGEND

GENERAL

	AP	ACCESS PANEL
TP	TP	AUTOMATIC TRAP PRIMER
	CE	CAP OR PLUG EXISTING
	CO	CLEANOUT
	FCO	FLOOR CLEANOUT (FLUSH FLOOR)
	DCO	CLEANOUT (DANDY)
	WCO	CLEANOUT (WALL)
	CTE	CONNECT TO EXISTING
	AD-A	DRAIN (AREA DRAIN & TYPE)
	FD-A	DRAIN (FLOOR DRAIN & TYPE)
	FS-A	DRAIN (FLOOR SINK & TYPE)
	RD-A	DRAIN (ROOF DRAIN & TYPE)
	TD-A	DRAIN (TRENCH DRAIN & TYPE)
DC	DC	DRESSER COUPLING
	DN	DOWN (PENETRATES LEVEL BELOW)
		DROP (DOES NOT PENETRATE LEVEL BELOW)
	HTI	HEAT TRACE AND INSULATE (FREEZE PROTECTION)
	TMC	HOT WATER TEMPERATURE MAINTENANCE CABLE
		INDICATES DIRECTION OF FLOW
		INDICATES DIRECTION OF SLOPE DOWN
1		KEY DESIGNATION
	KWHTI	KITCHEN WASTE HEAT TRACE AND INSULATE

		NATURAL GAS TEST COCK WITH PLUG
	OED	OPEN END DRAIN WITH TRAP
		PIPE ANCHOR
		PVC SCHEDULE 40 SOLID WALL EXPANSION JOINT
		RISE (DOES NOT PENETRATE LEVEL ABOVE)
	SA	SHOCK ABSORBER
		SLEEVE
		SOVENT AERATOR
		SOVENT DE-AERATOR
		UP (PENETRATES LEVEL ABOVE)
		WALL HYDRANT
E	E	WATER HEATER VENT EXHAUST
I	I	WATER HEATER COMBUSTION AIR INTAKE
	WTS	WATER TIGHT SLEEVE
	W & T	WASTE & TRAP

PIPING

	ETR	EXISTING WORK TO REMAIN (ABOVE GROUND) (PERTAINS TO ALL SYSTEMS)
	DEMO	EXISTING WORK TO BE REMOVED ABOVE GROUND (PERTAINS TO ALL SYSTEMS)
	ETR	EXISTING WORK TO REMAIN BELOW GROUND OR FLOOR (PERTAINS TO ALL SYSTEMS)
	DEMO	EXISTING WORK TO BE REMOVED BELOW GROUND OR FLOOR (PERTAINS TO ALL SYSTEMS)
		NEW WORK TO BELOW GROUND OR FLOOR (PERTAINS TO ALL SYSTEMS)
BDTV	BDTV	BLOWDOWN TANK VENT
CA	CA	COMPRESSED AIR PIPING
CBW	CBW	CARBONATED BEVERAGE WASTE
	CW	COLD WATER
DYE	DYE	DYE (FROM HAIR COLORING SINK)
ESPPD	ESPPD	ELEVATOR SUMP PUMP PRESSURE DISCHARGE
GRL	GRL	GARAGE RAIN LEADER
GSV	GSV	GARAGE SEPARATOR VENT
GW	GW	GARAGE WASTE
GSID	GSID	GREASE INTERCEPTOR SUCTION DISCHARGE
HW	HW	HOT WATER
HWC	HWC	HOT WATER RECIRCULATION
140	140HW	HOT WATER (140°F)
140C	140HW	HOT WATER RECIRCUALTION (140°F)
180	180HW	HOT WATER (180°F)
180C	180HW	HOT WATER RECIRCUALTION (180°F)

IW	IW	INDIRECT WASTE
IR	IR	IRRIGATION WATER
KW	KW	KITCHEN WASTE
G	G	NATURAL GAS
GTV	GTV	NATURAL GAS/PROPANE TRAIN, APPLIANCE, OR REGULATOR VENT
MA	MA	MEDICAL AIR PIPING
OX	OX	MEDICAL OXYGEN PIPING
VAC	VAC	MEDICAL VACUUM PIPING
NPCW	NPCW	NON-POTABLE COLD WATER
NPHW	NPHW	NON-POTABLE HOT WATER W/ TEMP. MAINTENANCE CABLE
NPHWC	NPHWC	NON-POTABLE HOT WATER CIRCULATION
PG	PG	PROPANE GAS
PD	PD	PUMPED DISCHARGE
BEER	BEER	PVC CONDUIT (BEER)
SODA	SODA	PVC CONDUIT (SODA)
	RL	RAIN LEADER
SRL	SRL	SECONDARY RAIN LEADER
S or W		SOIL OR WASTE
SSVS		SUBSLAB VENTILATION SYSTEM (PROVIDED UNDER BASE BUILDING)
TP		TRAP PRIMER WATER
V		VENT
PPV	PPV	WATER HEATER POSITIVE PRESSURE VENT

VALVES

	RPBFP	BACKFLOW PREVENTER
	BV	BALANCING VALVE
		BALANCING VALVE ASSEMBLY
	CV	CHECK VALVE
	DV-A	DRAIN VALVE TYPE WITH HOSE THREADS
	HB-A	HOSE BIBB TYPE WITH HOSE THREADS
		HOT WATER CIRCULATION FLOW SPLITTER
	PRV	PRESSURE REDUCING VALVE
		SHUTOFF VALVE
		SHUTOFF VALVE (EXISTING)
	SV	SOLENOID VALVE
	VIV	VALVE IN VERTICAL

MISCELLANEOUS

- CONNECT TO EXISTING
- RISER DESIGNATION (X) — NUMBER DENOTES WATER, LETTER DENOTES SANITARY
- 4/6 16 FU — CAPPED CONNECTION DESIGNATION — TOP DENOTES SIZE (IN.) BOTTOM DENOTES SERVICE TYPE SIDE DENOTES FUTURE FIXTURE UNITS
- EXISTING PLUMBING FIXTURE TO BE REMOVED (SAMPLE)
- 1-1 EQUIPMENT DESIGNATION

LEGEND NOTE:
NOT ALL SYMBOLS ARE NECESSARILY USED. ABSENCE OF A SYMBOL ON THE DRAWINGS DOES NOT NECESSARILY MEAN IT IS NOT REQUIRED. REFER TO DETAILS & SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF WORK REQUIRED.

ABBREVIATIONS

AD-A	DRAIN (AREA DRAIN & TYPE)
ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
ALT	ALTITUDE OR ALTERNATE
AMP	AMPERE
AP	ACCESS PANEL
ARCH	ARCHITECT
AVG	AVERAGE
BDTV	BLOWDOWN TANK VENT
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BSMT	BASEMENT
BV	BALANCING VALVE
BW	BACKWATER VALVE
C&C	CUT & CAP
CBW	CARBONATED BEVERAGE WASTE
CE	CAP OR PLUG EXISTING
CI	CAST IRON PIPE & FITTINGS
CO	CLEANOUT
CP	CIRCULATOR PUMP
CTE	CONNECT TO EXISTING
CU	COPPER PIPE & FITTINGS
CV	CHECK VALVE
CVT	CONCENTRIC VENT TERMINATION
CW	COLD WATER
CWR	COLD WATER RISER
DC	DRESSER COUPLING
DCO	CLEANOUT (DANDY)
DEMO	DEMOLITION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DV-A	DRAIN VALVE TYPE W/ HOSE THREADS
EA	EACH
EFF	EFFICIENCY
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
ENT	ENTER
ESSPD	ELEVATOR SUMP PUMP PRESSURE DISCHARGE
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH-A	WATER HEATER (ELECTRIC & TYPE)
EWT	ENTERING WATER TEMPERATURE
EXIST.	EXISTING
F	FAHRENHEIT
FAI	FRESH AIR INTAKE
FCO	FLOOR CLEANOUT
FD-A	DRAIN (FLOOR DRAIN & TYPE)
FFE	FINISHED FLOOR ELEVATION
FGE	FINISHED GRADE ELEVATION
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FS-A	DRAIN (FLOOR & SINK TYPE)
FT	FEET
FTR	FINNED TUBE RADIATION

G	GAS
GAL	GALLONS
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRL	GARAGE RAIN LEADER
GSID	GREASE INTERCEPTOR SUCTION DISCHARGE
GSV	GARAGE SEPARATOR VENT
GTV	NATURAL GAS/PROPANE TRAIN APPLIANCE, OR REGULATOR VENT
GW	GARAGE WASTE
GWH-A	WATER HEATER (GAS & TYPE)
GWB	GYPSUM WALL BOARD
HB	HOSE BIBB
HB-A	HOSE BIBB WITH HOSE THREADS
HGT	HEIGHT
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
HTI	HEAT TRACE AND INSULATE (FREEZE PROTECTION)
HW	HOT WATER
HWC	HOT WATER RECIRCULATION
HWCR	HOT WATER RECIRCULATION RISER
HWR	HOT WATER RISER
HZ	HERTZ
ID	INSIDE DIAMETER
IN	INCHES
INV	INVERT ELEVATION
IR	IRRIGATION WATER
IW	INDIRECT WASTE
JS	JANITOR SINK
KE	KITCHEN EQUIPMENT
KEC	KITCHEN EQUIPMENT CONTRACTOR
KW	KITCHEN WASTE
KW & V	KITCHEN WASTE & VENT
KWHTI	KITCHEN WASTE HEAT TRACE AND INSULATE
L	LENGTH
LAV	LAVATORY
LB	POUND
LF	LINEAR FEET
LP	PROPANE GAS
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTH
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MSB	MOP SERVICE BASIN
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOISE CRITERIA
NO	NORMALLY OPEN
No.	NUMBER
NOM	NOMINAL
NPCW	NON-POTABLE COLD WATER
NPHW	NON-POTABLE HOT WATER
NPHWC	NON-POTABLE HOT WATER RECIRCULATION
NTS	NOT TO SCALE
OED	OPEN-END DRAIN WITH CAP

PD	PUMPED DISCHARGE
PBG	PLUMBING
POS	PROVIDED BY OTHER SECTION
PPV	WATER HEATER POSITIVE PRESSURE VENT
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAUGE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RD-A	DRAIN (ROOF DRAIN & TYPE)
RPBFP	BACKFLOW PREVENTER
REQD	REQUIRED
RL	RAIN LEADER
RLA	RUNNING LOAD AMPS
RLS	RAIN LEADER STACK
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
S=0.01	SLOPE = 1/8" PER FOOT - 1%
S=0.02	SLOPE = 1/4" PER FOOT - 2%
S=0.04	SLOPE = 1/2" PER FOOT - 4%
S & V	SOIL & VENT
S or W	SOIL OR WASTE
SA	SHOCK ABSORBER
SH	SHOWER
SK	SINK
SPECS	SPECIFICATIONS
SF	SQUARE FEET
SQ	SQUARE
SRL	SECONDARY RAIN LEADER
SS	SOIL STACK
SSVS	SUBSLAB VENTILATION SYSTEM
STL	STEEL
SV	SOLENOID VALVE
T	TEMPERATURE
TD-A	DRAIN (TRENCH DRAIN & TYPE)
TEMP	TEMPERATURE
TMC	HOT WATER TEMPERATURE MAINTENANCE CABLE
TSTAT	THERMOSTAT
TOP	TOP OF PIPE
TOT	TOTAL
TP	AUTOMATIC TRAP PRIMER
TYP	TYPICAL
URN	URINAL
V	VENT
VB	VACUUM BREAKER
V	VOLTS (ELECTRICAL)
VEL	VELOCITY
VIV	VALVE IN VERTICAL
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WIDTH OR WATT
W & T	WASTE & TRAP
W & V	WASTE & VENT
W/	WITH
WC	WATER COLUMN
WCO	CLEANOUT (WALL)
WG	WATER GAUGE
W/O	WITHOUT
WP	WASTE PIPE
WPD	WATER PRESSURE DROP
WS	WASTE STACK
WTD	WATER TEMPERATURE DIFF.
WTS	WATER TIGHT SLEEVE

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REFER TO THE PLUMBING SPECIFICATIONS.
2. GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
3. DRAWINGS ARE DIAGRAMMATIC: DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
4. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE LOCAL STATE PLUMBING CODE, THE LOCAL STATE BUILDING CODE AND THE DRAWINGS. NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
5. MANUFACTURERS' MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
6. ALL PRODUCT INSTALLATIONS SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
7. RUN PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS.
8. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
9. PROVIDE VENTS AT HIGH POINTS IN PRESSURE PIPING SYSTEMS AND DRAIN VALVES AT LOW POINTS.
10. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS IN ESTABLISHING PIPE RUNS AND SPACE CONDITIONS.
11. FOR SIZES AND REQUIREMENTS OF ALL HVAC EQUIPMENT SHOWN IN THESE DRAWINGS, REFER TO HVAC DRAWINGS AND SPECIFICATIONS.
12. PRIOR TO THE START OF CORING ANY STRUCTURAL MEMBER PLUMBING SUBCONTRACTOR SHALL COORDINATE LOCATION OF PENETRATION WITH STRUCTURAL ENGINEER AND GENERAL CONTRACTOR. PLUMBING SUBCONTRACTOR SHALL PREPARE AND SUBMIT TO STRUCTURAL ENGINEER AND ARCHITECT A SET OF PENETRATION DRAWINGS DURING COORDINATION DRAWING REVIEW PERIOD. PLUMBING SUBCONTRACTOR MAY DEVIATE FROM LOCATIONS OF PENETRATIONS AS SHOWN ON PLUMBING DRAWINGS BUT MUST COORDINATE ALTERNATIVE LOCATIONS WITH STRUCTURAL ENGINEER.
13. PRIOR TO START OF INSTALLATION OF BELOW SLAB PIPING, PLUMBING SUBCONTRACTOR SHALL COORDINATE LOCATIONS OF PIPING WITH STRUCTURAL FOOTINGS, GRADE BEAMS, ETC. WITH STRUCTURAL ENGINEER.
14. PRIOR TO INSTALLATION OF UNDER SLAB PIPING AT GROUND FLOOR, PLUMBING SUBCONTRACTOR SHALL COORDINATE ALL EXTERIOR INVERT ELEVATIONS WITH CIVIL ENGINEER.
15. PRIOR TO INSTALLATION OF ANY SURFACE MOUNTED OR RECESSED PLUMBING COMPONENTS (I.E. WALL HYDRANTS, PIPING PENETRATIONS, ETC.) ON EXTERIOR OF BUILDING, PLUMBING SUBCONTRACTOR SHALL COORDINATE THEIR EXACT LOCATION WITH ARCHITECT AND GENERAL CONTRACTOR.
16. PRIOR TO INSTALLATION OF ANY FLOOR DRAINS THIS ENTIRE PROJECT, PLUMBING SUBCONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF DRAINS WITH MECHANICAL SUBCONTRACTOR & ARCHITECT.
17. PLUMBING SUBCONTRACTOR SHALL COORDINATE ALL ROOF PENETRATIONS WITH ROOFING SUBCONTRACTOR. REFER TO ARCHITECTURAL DRAWINGS FOR FLASHING AT ALL ROOF PENETRATIONS.
18. THE PLUMBING SUBCONTRACTOR SHALL INSULATE ALL SANITARY, WASTE AND CONDENSATE PIPING AT THE CEILING OF THE TOP FLOOR.
19. PLUMBING SUBCONTRACTOR SHALL INSTALL TRAP PRIMER VALVES FOR ALL FLOOR DRAINS LOCATED WITHIN BUILDING. THE PLUMBING SUBCONTRACTOR SHALL COORDINATE EXACT LOCATION OF TRAP PRIMER VALVE AND WATER PIPING IN FIELD.
20. NOT ALL BRANCH PIPING AND OR OFFSETS FOR SOIL, WASTE, VENT AND DOMESTIC WATER PIPING IS SHOWN FOR CLARITY PURPOSES. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING SUBCONTRACTOR TO OWN THE PROVISION OF THIS PIPING DURING BIDDING AND CONSTRUCTION.
21. EACH INDIVIDUAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL NECESSARY FIRE STOPPING OF SLEEVES, PIPING, ELECTRICAL PIPING, DUCTWORK, ETC. PENETRATING ALL RATED PARTITIONS, FLOORS, AND CEILINGS FOR HIS/HER OWN WORK.
22. ALL WASTE/SANITARY AND STORM STACKS SHALL HAVE A CLEAN OUT AT THEIR BASE.
23. THE PLUMBING SUBCONTRACTOR SHALL HEAT TRACE AND INSULATE ALL PIPING SUBJECTED TO FREEZING TEMPERATURES.
24. PLUMBING SUBCONTRACTOR SHALL REFER TO PLUMBING FLOOR PLANS FOR ALL NATURAL GAS DISTRIBUTION PIPE SIZES.
25. PRIOR TO THE START OF WORK THE PLUMBING SUBCONTRACTOR SHALL COORDINATE ALL STACK LOCATIONS WITH ARCHITECT AND CONSTRUCTION MANAGER TO AVOID STRUCTURAL AND PARTITION CONFLICTS.
26. PRIOR TO THE START OF WORK THE PLUMBING SUBCONTRACTOR SHALL COORDINATE THE REQUIREMENTS FOR AND THE LOCATIONS OF ALL EQUIPMENT PERTAINING TO THE PROJECT.
27. ALL PLUMBING SYSTEMS TO BE INSTALLED IN PARTITIONS WHERE POSSIBLE. COORDINATE WITH GENERAL CONTRACTOR/CONSTRUCTION MANAGER PRIOR TO START OF WORK.
28. PLUMBING SUBCONTRACTOR SHALL OWN DRIP LEGS AND SHUT OFF VALVES AT THE BASE OF ALL NATURAL GAS RISERS AND AT ALL CONNECTIONS TO EQUIPMENT.
29. PLUMBING SUBCONTRACTOR SHALL OWN ALL FINAL CONNECTIONS OF GAS PIPING TO ALL GAS FIRED EQUIPMENT.
30. PLUMBING SUBCONTRACTOR SHALL OBTAIN ALL BUILDING STANDARDS & LEASE AGREEMENTS (IF APPLICABLE) PRIOR TO START OF BIDDING & SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

engineering design services incorporated
141 knollcrest highway, zionsville, in 46077
tel (401) 733-5281 fax (401) 733-5284

SHEET CONTENTS:

PLUMBING LEGENDS & NOTES

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

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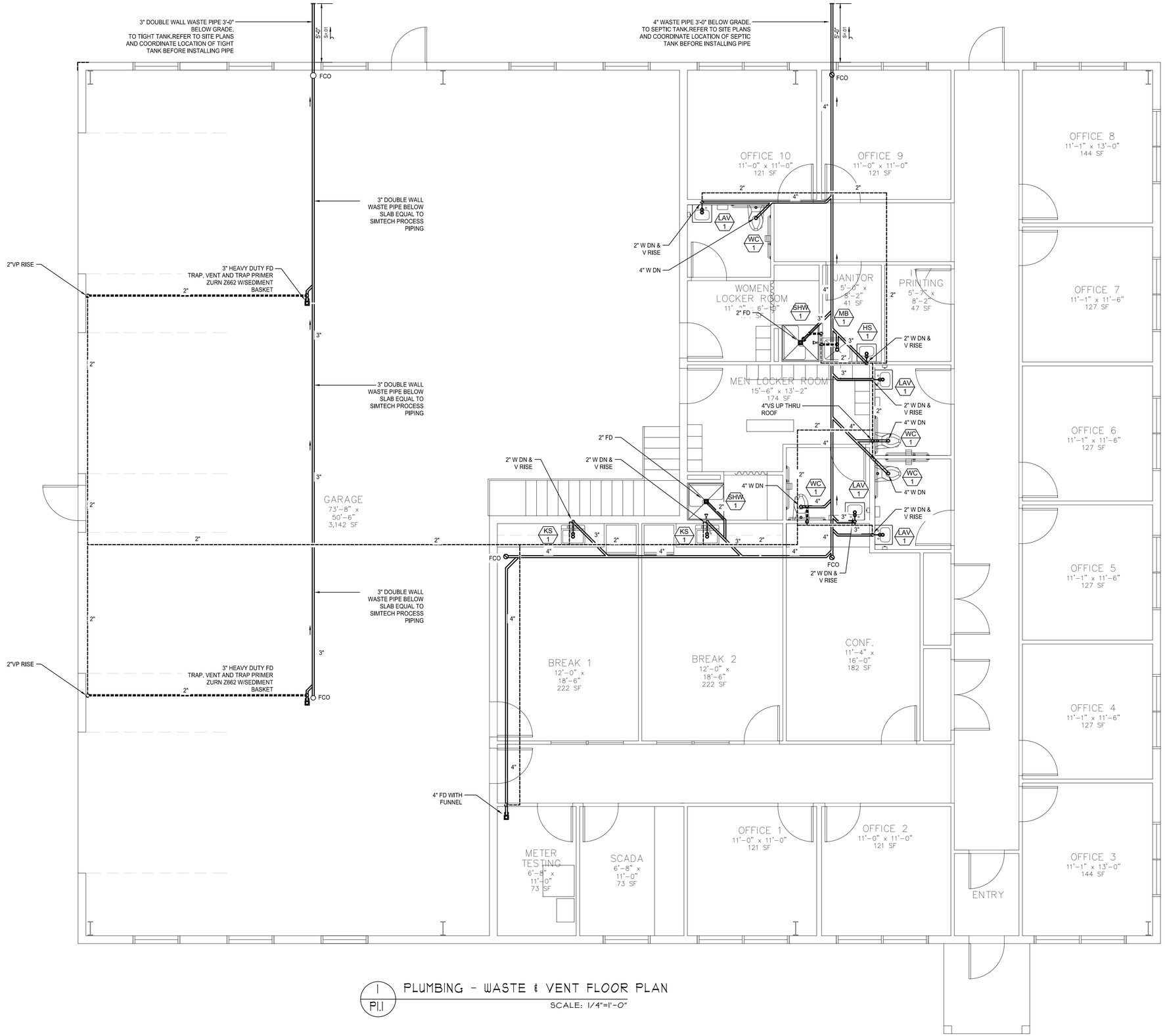

1 / P1.1 PLUMBING - WASTE & VENT FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

CIVIL ENGINEERING DESIGN SERVICES INCORPORATED
141 Aquidneck Highway, Portsmouth, RI 02871
Tel: (401) 683-1630 Fax: (401) 683-2964

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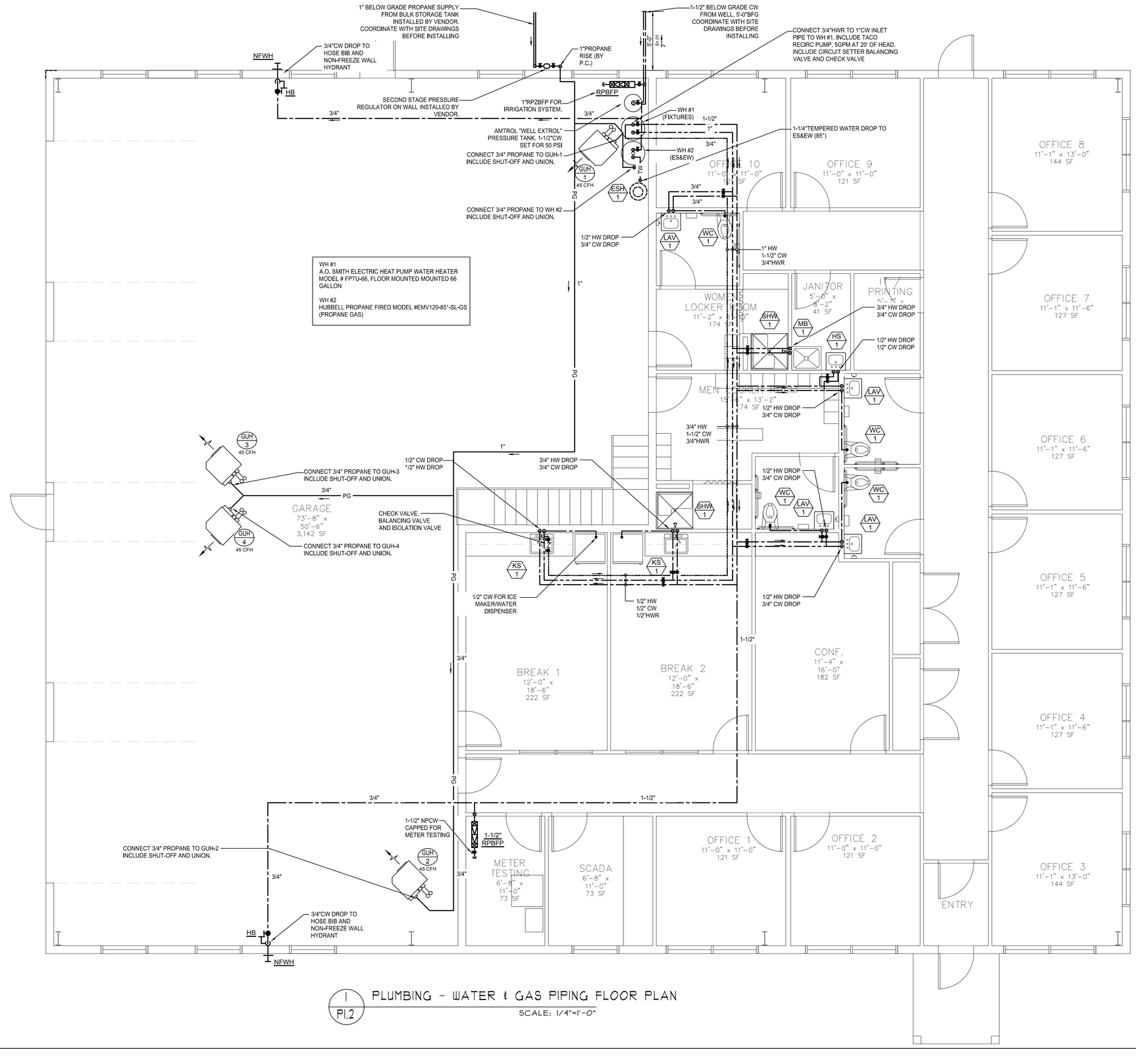
PLUMBING WASTE & VENT FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

P1.1



1 / P1.2 PLUMBING - WATER & GAS PIPING FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Glendale, RI 02826
tel (401) 710-1004 Fax (401) 765-0964

SHEET CONTENTS:

PLUMBING WATER & GAS PIPING FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

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PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE INFORMATION				FITTING INFORMATION			CONNECTIONS				TRAP	CARRIER	MAXIMUM WATER CONSUMPTION	REMARKS AND SPECIFICATIONS
	DESCRIPTION	MANUFACTURER	MODEL	COLOR	TYPE	MAKE/MODEL	SUPPLY	WASTE	VENT	HW	CW				
WC 1	WATER CLOSET (ADA)	AMERICAN STANDARD	CADET PRO "RIGHT-HEIGHT" #215AA104.020	WHITE	FLOOR-MOUNTED	AMERICAN STANDARD CHROME TRIP LEVER	SUPPLY WITH STOP & LOOSE KEY	3"	2"	-	1/2"	INTEGRAL	-	1.28 GPF	G.C. SHALL COORDINATE FINAL SELECTIONS WITH OWNER PRIOR TO BIDDING/CONSTRUCTION.
LAV 1	LAVATORY (ADA)	AMERICAN STANDARD	LUCERNE 0355.012	WHITE	FAUCET-MOUNT	CHICAGO FAUCET W4D-DB6AE1-317ABCP	4" CENTERS, 2 HANDLE, POP-UP STRAINER	1-1/2"	1-1/2"	1/2"	1/2"	1-1/4"x1-1/2" CAST BRASS P-TRAP w/C.O. PLUG	ZURN OR EQUAL	0.5 GPM	G.C. SHALL COORDINATE FINAL SELECTIONS WITH OWNER PRIOR TO BIDDING/CONSTRUCTION. PROVIDE WITH 0.5 GPM AERATOR.
SHW 1	SHOWER	AQUATIC 36"X36"X72"		WHITE	SHOWER-MOUNT	SYMMONS 9605-PLR-1.5-X	-	2"	2"	1/2"	1/2"	2" P-TRAP	-	1.5 GPM	PROVIDE IN WHITE WITH L-SHAPED GRAB BAR, FOLD-UP SEAT, SOAP DISH, CURTAIN ROD, AND VINYL FLEXIBLE DAM. HANDHELD SHOWER SYSTEM POWERED BY TEMPTROL PRESSURE BALANCING VALVE, 36" SLIDE BAR, SEPARATE TWO FUNCTION DIVERTER, IN-LINE VACUUM BREAKER, 60" FLEXIBLE METAL HOSE, HAND SHOWER, SHOWER HEAD, 1.5 GPM FLOW RESTRICTORS AND INTEGRAL SERVICE STOPS. PRESSURE BALANCING VALVE WITH HANDHELD SHOWER ASSEMBLY, SLIDE BAR AND DIVERTER SHALL BE LOCATED ON LONG WALL. SHOWER HEAD SHALL BE LOCATED ON SHORT WALL OPPOSITE FOLD UP SEAT. OUTLET WATER SHALL BE SET TO A MAX TEMP OF 110°.
KS 1	SINK	ELKAY	LUSTERTONE LRAD-2219-65-4-Q	STAINLESS STEEL	SURFACE MOUNTED	CHICAGO FAUCET 200-A317CPR-CF	8" CENTERS W/ SWING SPOUT	1-1/2"	1-1/2"	1/2"	1/2"	1-1/4"x1-1/2" CAST BRASS P-TRAP w/C.O. PLUG	-	2.0 GPM	G.C. SHALL COORDINATE FINAL SELECTIONS WITH OWNER PRIOR TO BIDDING/CONSTRUCTION. PROVIDE WITH 2.0 GPM AERATOR.
HS 1	LAVATORY (ADA)	AMERICAN STANDARD	LUCERNE 0355.012	WHITE	FAUCET-MOUNT	CHICAGO FAUCET W4D-DB6AE1-317ABCP	4" CENTERS, 2 HANDLE, POP-UP STRAINER	1-1/2"	1-1/2"	1/2"	1/2"	1-1/4"x1-1/2" CAST BRASS P-TRAP w/C.O. PLUG	ZURN OR EQUAL	1.5 GPM	G.C. SHALL COORDINATE FINAL SELECTIONS WITH OWNER PRIOR TO BIDDING/CONSTRUCTION. PROVIDE WITH 1.5 GPM AERATOR.
ESH 1	EMERGENCY SHOWER/ EYEWASH (ADA)	GUARDIAN	GBF1909	ORANGE	-	1" IPS CHROME PLATED BRASS STAY-OPEN BALL VALVE	-			1-1/4"TW (85°)		-	-	20 GPM	G.C. SHALL COORDINATE FINAL SELECTIONS WITH OWNER PRIOR TO BIDDING/CONSTRUCTION. PROVIDE WITH 20 GPM FLOW REGULATOR AND G3800LF THERMOSTATIC MIXING VALVE.
MB 1	MOP BASIN	FIAT	MSB 2424 24"X24"X12" HIGH		WALL MNTD. WITH VACUUM BREAKER & PAIL HOOK	FIAT #830AA	1/2"CW&HW SUPPLIES TO FAUCET	3"	2"	1/2"	1/2"	3" DEEP SEAL	-	5 GPM	INCLUDE 832AA HOSE & HOSE BRACKET, 833AA SILICONE SEALANT AND MSG STAINLESS STEEL WALL GUARDS.

NOTES:
1. APPLY SILICONE SEALANT WHERE FIXTURES MEET FLOORS AND WALLS.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket
Water Division
New Garage and Offices

Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerset, RI 02824
Tel (401) 510-1001 Fax (401) 510-2998

SHEET CONTENTS:

PLUMBING SCHEDULE

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

P2.1

ABBREVIATIONS

GENERAL ABBREVIATIONS:

AAV	AUTOMATIC AIR VENT	L	LENGTH
ADD'L	ADDITIONAL	LAT	LEAVING AIR TEMPERATURE
AFF	ABOVE FINISHED FLOOR	LB	POUND
AMS	AIR FLOW MEASURING STATION	LF	LINEAR FEET
ALT	ALTITUDE OR ALTERNATE	LD	LINEAR DIFFUSER
AMP	AMPERE	LRA	LOCKED ROTOR AMPS
AP	ACCESS PANEL	LVD	LOUVERED DOOR
APD	AIR PRESSURE DROP	LVG	LEAVING
ARCH	ARCHITECT	LWT	LEAVING WATER TEMPERATURE
ATC	AUTOMATIC TEMP. CONTROL		
ATM	ATMOSPHERE	MAX	MAXIMUM
AVG	AVERAGE	MBH	THOUSAND BTH
		MCA	MINIMUM CIRCUIT AMPS
BDD	BACKDRAFT DAMPER	MD	MOTOR OPERATED DAMPER
BG	BLAST GATE DAMPER	MECH	MECHANICAL
BHP	BRAKE HORSEPOWER	MEZZ	MEZZANINE
BI	BACKWARDS INCLINED	MFR	MANUFACTURER
BLDG	BUILDING	MIN	MINIMUM
BMS	BUILDING MANAGEMENT SYSTEM	MUA	MAKE-UP AIR
BOD	BOTTOM OF DUCT		
BOP	BOTTOM OF PIPE	N/A	NOT APPLICABLE
BSMT	BASEMENT	NC	NORMALLY CLOSED
BTU	BRITISH THERMAL UNIT	NC	NOISE CRITERIA
BTH	BTU PER HOUR	NIC	NOT IN CONTRACT
		NO	NORMALLY OPEN
CA	COMPRESSED AIR	No.	NUMBER
CDW	CONDENSER WATER	NOM	NOMINAL
CENT	CENTRIFUGAL	NTS	NOT TO SCALE
CF	CUBIC FEET		
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR
CL	CENTERLINE	OD	OUTSIDE DIAMETER
C.L.	COLUMN LINE	ODP	OPEN DRIP PROOF
CND	CONDENSATE	OED	OPEN END DUCT
CLG	CEILING OR COOLING	OV	OUTLET VELOCITY
C.O.	CLEAN-OUT		
CO	CARBON MONOXIDE	PD	PRESSURE DROP
CO2	CARBON DIOXIDE	PH	PHASE
COL	COLUMN	PHC	PREHEAT COIL
CONN	CONNECTION	PBG	PLUMBING
CONTR	CONTRACTOR	POS	PROVIDED BY OTHER SECTION
CV	CONSTANT VOLUME	PSI	POUNDS PER SQUARE INCH
		PSIA	PSI ABSOLUTE
DB	DRY BULB TEMPERATURE	PSID	PSI DIFFERENTIAL
		PSIG	PSI GAUGE
DEG	DEGREE DIRECT	PVC	POLYVINYL CHLORIDE
DDC	DIGITAL CONTROL	PRV	PRESSURE REDUCING VALVE
DIA	DIAMETER		
DIFF	DIFFUSER	QTY	QUANTITY
DIM	DIMENSION		
DN	DOWN	R	RADIUS
DP	DIFFERENTIAL PRESSURE	RA	RETURN AIR
DWDI	DOUBLE WIDTH DOUBLE INLET	REG	REGISTER
DX	DIRECT EXPANSION	RET	RETURN
		REQD	REQUIRED
EA	EACH OR EXHAUST AIR	RH	RELATIVE HUMIDITY
EAT	ENTERING AIR TEMPERATURE	RLA	RUNNING LOAD AMPS
ECH	ELECTRIC CABINET HEATER	RLL	REFRIGERANT LIQUID LINE
EFF	EFFICIENCY	RM	ROOM
ELEC	ELECTRICAL	RPM	REVOLUTIONS PER MINUTE
ELEV	ELEVATION	RSL	REFRIGERANT SUCTION LINE
EMER	EMERGENCY		
EMS	ENERGY MANAGEMENT SYSTEM	SA	SUPPLY AIR
ENT	ENTER	SCH	SCHEDULE
ESP	EXTERNAL STATIC PRESSURE	SD	SMOKE DETECTOR
EWT	ENTERING WATER TEMPERATURE	SEN	SENSIBLE
EXH	EXHAUST	SHC	SENSIBLE HEAT CAPACITY
EXIST.	EXISTING	SP	STATIC PRESSURE
		SPECS	SPECIFICATIONS
F	FAHRENHEIT OR FAN	SQ	SQUARE
FA	FREE AREA	SF	SQUARE FEET
FD	FIRE DAMPER (ACCESS DOOR)	SS	STAINLESS STEEL
FLA	FULL LOAD AMPS	STL	STEEL
FLEX	FLEXIBLE	SUP	SUPPLY
FPM	FEET PER MINUTE	SWSI	SINGLE WITH SINGLE INLET
FPS	FEET PER SECOND		
FRP	FIBERGLASS REINFORCED PLASTIC	T	TEMPERATURE
FS	FLOW SWITCH	TEL	TELEPHONE
FT	FEET	TEFC	TOT. ENCLOSED FAN COOLED
FTR	FINNED TUBE RADIATION	TEMP	TEMPERATURE
		TSTAT	THERMOSTAT
G	GAS	TOD	TOP OF DUCT
GAL	GALLONS	TON	12,000 BTH
GALV	GALVANIZED	TOP	TOP OF PIPE
GC	GENERAL CONTRACTOR	TOT	TOTAL
GPH	GALLONS PER HOUR	TSP	TOTAL STATIC PRESSURE
GPM	GALLONS PER MINUTE	TYP	TYPICAL
GWB	GYPSUM WALL BOARD		
		V	VENT
HB	HOSE BIBB	VB	VACUUM BREAKER
HC	HEATING COIL	VD	VOLUME DAMPER
HEX	HEAT EXCHANGER	V	VOLTS (ELECTRICAL)
HGT	HEIGHT	VEL	VELOCITY
HP	HORSEPOWER		
HR	HOUR	W	WIDTH OR WATT
HTG	HEATING	W/	WITH
HW	HOT WATER	WB	WET BULB TEMPERATURE
HZ	HERTZ	WC	WATER COLUMN
		WG	WATER GAUGE
ID	INSIDE DIAMETER	WMS	WIRE MESH SCREEN
IN	INCHES	W/O	WITHOUT
		WPD	WATER PRESSURE DROP
KW	KILOWATT	WTD	WATER TEMPERATURE DIFF.

CONTROLS ABBREVIATIONS:

ACD	AUTOMATIC CONTROL DAMPER	LSPS	LOW STATIC PRESSURE SWITCH
ACV	AUTOMATIC CONTROL VALVE	LS	LEVEL SENSOR
AMS	AIR FLOW MEASURING STATION		
ALM	ALARM	MD	MOTORIZED DAMPER
ATC	AUTOMATIC TEMPERATURE CONTROL		
ATS	AIR TEMPERATURE SENSOR	NC	NORMALLY CLOSED (POWER LOSS)
		NO	NORMALLY OPEN (POWER LOSS)
BD	BACKDRAFT DAMPER		
BV	BYPASS VALVE	OAH	OUTSIDE AIR HUMIDITY SENSOR
		OAT	OUTSIDE AIR TEMP. SENSOR
CO2	CARBON DIOXIDE SENSOR		
CO	CARBON MONOXIDE SENSOR	RH	RELATIVE HUMIDITY
CT	CURRENT TRANSFORMER		
CV	CONTROL VALVE	S	SWITCH
		SP	STATIC PRESSURE SENSOR
DDC	DIRECT DIGITAL CONTROL	SD	SMOKE DETECTOR
DPS	DIFFERENTIAL PRESSURE SWITCH	SPD	SPEED CONTROL
DPT	DIFFERENTIAL PRESSURE SENSOR	S/S	START/STOP
DPV	DIFF. PRESSURE BYPASS VALVE		
DSD	DUCT MOUNTED SMOKE DETECTOR	T	THERMOSTAT
DWDI	DOUBLE WIDTH DOUBLE INLET	TS	TEMPERATURE SENSOR
ES	END SWITCH	WTS	WATER TEMPERATURE SENSOR
FM	FLOW METER/TRANSMITTER		
FZ	FREEZESTAT		
H	HUMIDISTAT		
HEPA	HIGH EFF. PARTICULATE AIR FILTER		
HGB	HOT GAS BYPASS		
HHL	HIGH HUMIDITY LIMIT SENSOR		
HOA	HANDS-OFF AUTOMATIC SWITCH		
HS	HUMIDITY SENSOR		
HZ	HERTZ		

EQUIPMENT ABBREVIATIONS:

AC	AIR CONDITIONING UNIT	GMS	GLYCOL MAKE-UP SYSTEM
ACU	AC CONDENSING UNIT	GUH	GAS FIRED UNIT HEATER
AHU	AIR HANDLING UNIT		
AS	AIR SEPARATOR	H	HUMIDIFIER
		HP	HEAT PUMP
B	BOILER	HPU	HP CONDENSING UNIT
BB	BASE BOARD	HV	HEATING & VENTILATING UNIT
BC	BRANCH CONTROLLER	HWC	HOT WATER COIL
BP	BOILER PUMP		
BT	BUFFER TANK	LV	LOUVER
CAC	CRITICAL COOLING AC UNIT	KEF	KITCHEN EXHAUST FAN
CC	COOLING COIL		
CCU	CC CONDENSING UNIT	MAU	MAKE-UP AIR UNIT
CEF	CEILING EXHAUST FAN	MCC	MOTOR CONTROL CENTER
CH	CHILLER		
CP	CIRCULATOR PUMP	P	PUMP
CT	COOLING TOWER	PTAC	PACKAGED TERMINAL AC UNIT
CUH	CABINET UNIT HEATER		
CWC	CHILLED WATER COIL	R	RETURN GRILLE
		REF	ROOF EXHAUST FAN
DC	DRY COOLER	RHP	RADIANT HEATING PANEL
DEF	DISHWASHER EXHAUST FAN	RTU	ROOF TOP UNIT
DSF	DESTRATIFICATION FAN		
		S	SUPPLY DIFFUSER
E	EXHAUST GRILLE	SA	SOUND ATTENUATOR
EBB	ELECTRIC BASE BOARD	SAC	SPLIT AC UNIT
ECH	ELECTRIC CABINET HEATER	SHP	SPLIT HEAT PUMP
ECH	ELECTRIC CEILING HEATER	SF	SUPPLY FAN
EF	EXHAUST FAN		
ERV	ENERGY RECOVERY VENTILATOR	T	TRANSFER GRILLE
ET	EXPANSION TANK		
EUH	ELECTRIC UNIT HEATER	UH	UNIT HEATER
		UV	UNIT VENTILATOR
F	FURNACE		
FC	FAN COIL UNIT	VAV	VARIABLE AIR VOLUME BOX
FPB	FAN POWERED VAV	VFD	VARIABLE FREQUENCY DRIVE
FT	FINTUBE		
		WSHP	WATER SOURCE HEAT PUMP

MECHANICAL SYMBOL LEGEND

AIR DEVICES

- 4-WAY SUPPLY DIFFUSER
- 3-WAY SUPPLY DIFFUSER
- 2-WAY SUPPLY DIFFUSER
- 2-WAY CORNER SUPPLY DIFFUSER
- 1-WAY SUPPLY DIFFUSER
- RETURN REGISTER
- EXHAUST REGISTER
- SIDE WALL SUPPLY DIFFUSER
- SIDE WALL RETURN OR EXHAUST GRILLE

DUCTWORK

- STANDARD SIZE REDUCTION
- ASYMMETRICAL TRANSITION
- SQUARE-TO-ROUND TRANSITION
- STANDARD BRANCH TAKE-OFF
- ROUND BRANCH TAKE-OFF
- STANDARD TEE
- STANDARD TEE WITH TURNING VANES
- SLOPED DUCT RISE
- FIRE DAMPER ACCESS DOOR
- GREASE DUCT ACCESS DOOR
- DUCT RISE
- DUCT DROP
- STANDARD SQUARE ELBOW
- SQUARE ELBOW WITH TURNING VANES
- STANDARD RADIUS ELBOW (R=D)
- FIRE WRAPPED DUCTWORK
- ACOUSTICALLY LINED DUCTWORK
- OPEN ENDED DUCT OUTLET
- OPEN ENDED DUCT INTAKE
- OPEN ENDED DUCT OUTLET W/ SCREEN
- OPEN ENDED DUCT INTAKE W/ SCREEN

CONTROLS

- THERMOSTAT
- TS — TEMPERATURE SENSOR
- DSD — DUCT MOUNTED SMOKE DETECTOR

AIR DAMPERS

- MANUALLY ADJUSTABLE VOLUME DAMPER
- FIRE DAMPER
- M — MOTORIZED DAMPER

TAGS

- X / # / CFM — DIFFUSER TAG
- X / # — EQUIPMENT TAG
- # — REVISION
- CONNECT NEW TO EXISTING

LEGEND NOTE:
NOT ALL SYMBOLS ARE NECESSARILY USED. ABSENCE OF A SYMBOL ON THE DRAWINGS DOES NOT NECESSARILY MEAN IT IS NOT REQUIRED. REFER TO DETAILS & SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF WORK REQUIRED.

GENERAL CONSTRUCTION NOTES:

1. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH LOCAL CODES AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
3. THIS CONTRACTOR, PRIOR TO SUBMITTING HIS BID, SHALL VISIT THE PROJECT SITE TO FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. REQUESTS FOR COMPENSATION FOR EXTRA WORK, WHICH WOULD HAVE BEEN EVIDENT BY COMPLIANCE WITH THE PREVIOUS STATEMENT, WILL NOT BE CONSIDERED. THE CONTRACTOR SHALL CONDUCT A THOROUGH FIELD INVESTIGATION TO VERIFY WORK SHOWN ON THE DRAWINGS. THE DRAWINGS REFLECT THE BEST AVAILABLE INFORMATION FROM EXISTING PLANS AND SITE INVESTIGATIONS.
4. THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW THE EXACT ROUTING OF SYSTEMS OR LOCATION OF COMPONENTS. THE EXACT LOCATIONS, DIMENSIONS AND ALL OTHER DETAILS OF EQUIPMENT ARE THE RESPONSIBILITY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE. PROVIDE ALL DUCT AND PIPE TRANSITIONS REQUIRED FOR CONNECTION TO EQUIPMENT.
5. THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.
6. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DEBRIS WITHIN THE CONSTRUCTION AREA.
7. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
8. ALL OPENINGS IN WALLS SHALL BE KEPT PROPERLY SEALED AT ALL TIMES, EXCEPT WHEN BEING WORKED ON TO PRECLUDE THE POSSIBILITY OF FLOODING DUE TO STORM OR OTHER CAUSES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.
10. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK. ALL OFFSETS IN PIPING AND DUCTS TO AVOID OBSTRUCTIONS SHALL BE PROVIDED AT NO COST TO THE OWNER.
11. CONTRACTOR SHALL REFER TO THE COMPLETE SET OF CONTRACT DOCUMENTS INCLUDING SPECIFICATIONS AND OTHER TRADES FOR A FULL UNDERSTANDING OF ALL WORK REQUIRED.
12. WHERE USED THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
13. PROVIDE ALL REQUIRED RIGGING TO ACCOMMODATE THE REMOVAL & INSTALLATION OF ALL EQUIPMENT.
14. PROVIDE ACCESS PANELS FOR ALL CONCEALED DAMPERS, VALVES, AND EQUIPMENT.
15. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.
16. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF REGISTERS, DIFFUSERS, AND GRILLES.
17. CONTRACTOR SHALL SPRAY PAINT INSIDE OF DUCT BLACK, BEHIND ALL GRILLES AND REGISTERS.
18. ALL DUCTWORK AND PIPING SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS IN A NEAT AND WORKMANLIKE MANNER AND BE SUPPORTED AS REQUIRED BY CODES. DUCTWORK AND PIPING SHALL BE SET UP AND DOWN AND OFFSET AS REQUIRED TO SUIT FIELD CONDITIONS. DIELECTRIC COUPLINGS SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED.
19. IF A SECTION OF DUCT OR PIPE IS NOT LABELED FOR SIZE, THEN THE LARGER SIZE INDICATED ON THE DRAWINGS SHALL PREVAIL. SIZE OF DUCT RUN-OUTS TO DIFFUSERS SHALL EQUAL DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.
20. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.
21. PROVIDE CONDENSATE PUMPS THROUGHOUT CONDENSATE DRAINAGE SYSTEM AS REQUIRED TO PROPERLY REMOVE CONDENSATE. PROVIDE A PER PUMP LINE-ITEM ALLOWANCE.
22. REFRIGERANT PIPE SIZING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. LENGTH OF PIPE, ELEVATION CHANGE AND EQUIPMENT ORIENTATION SHALL BE TAKEN INTO ACCOUNT.
23. SUCCESSFULLY PRESSURE TEST ALL REROUTED PIPING SYSTEMS. TEST SHALL BE PERFORMED AT TWICE SYSTEM OPERATING PRESSURES. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS PROVE TIGHT.
24. ALL ROOF MOUNTED EQUIPMENT SHALL BE INSTALLED A MINIMUM OF 10' FROM THE ROOF EDGE. EQUIPMENT INSTALLED CLOSER THAN 10' SHALL REQUIRE THE INSTALLATION OF GUARD RAILS.
25. ALL CONCEALED ELECTRICAL CONNECTIONS SHALL BE HARD WIRED. PLUGS SHALL NOT BE USED AS A DISCONNECTING MEANS IN CONCEALED LOCATIONS.
26. CONTRACTOR SHALL PROVIDE ALL TEMPERATURE CONTROLS INCLUDING WIRING, TUBING, AND THERMOSTATS (WITH LOCKING COVERS) AND ALL MISCELLANEOUS APPURTENANCES TO MEET THE INTENT OF THESE DOCUMENTS.
27. DUCT SMOKE DETECTORS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED IN THE DUCTWORK BY MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.
28. ALL FRESH AIR INTAKES & DIRECT VENTS SHALL TERMINATE AT LEAST 10' HORIZONTALLY FROM ANY GAS METERS.
29. ALL THERMOSTATS, CONTROL SWITCHES, ETC. SHALL BE INSTALLED 48" AFF.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerset, RI 02834
tel (401) 510-1501 Fax (401) 510-2564

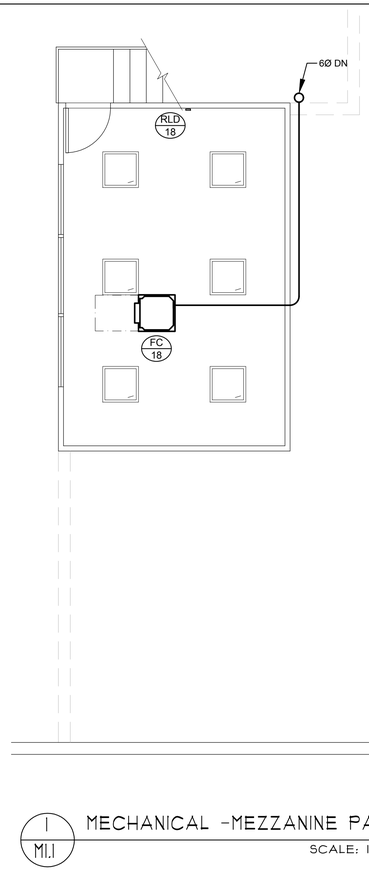
SHEET CONTENTS:

MECHANICAL LEGENDS & NOTES

PROJECT # 4222

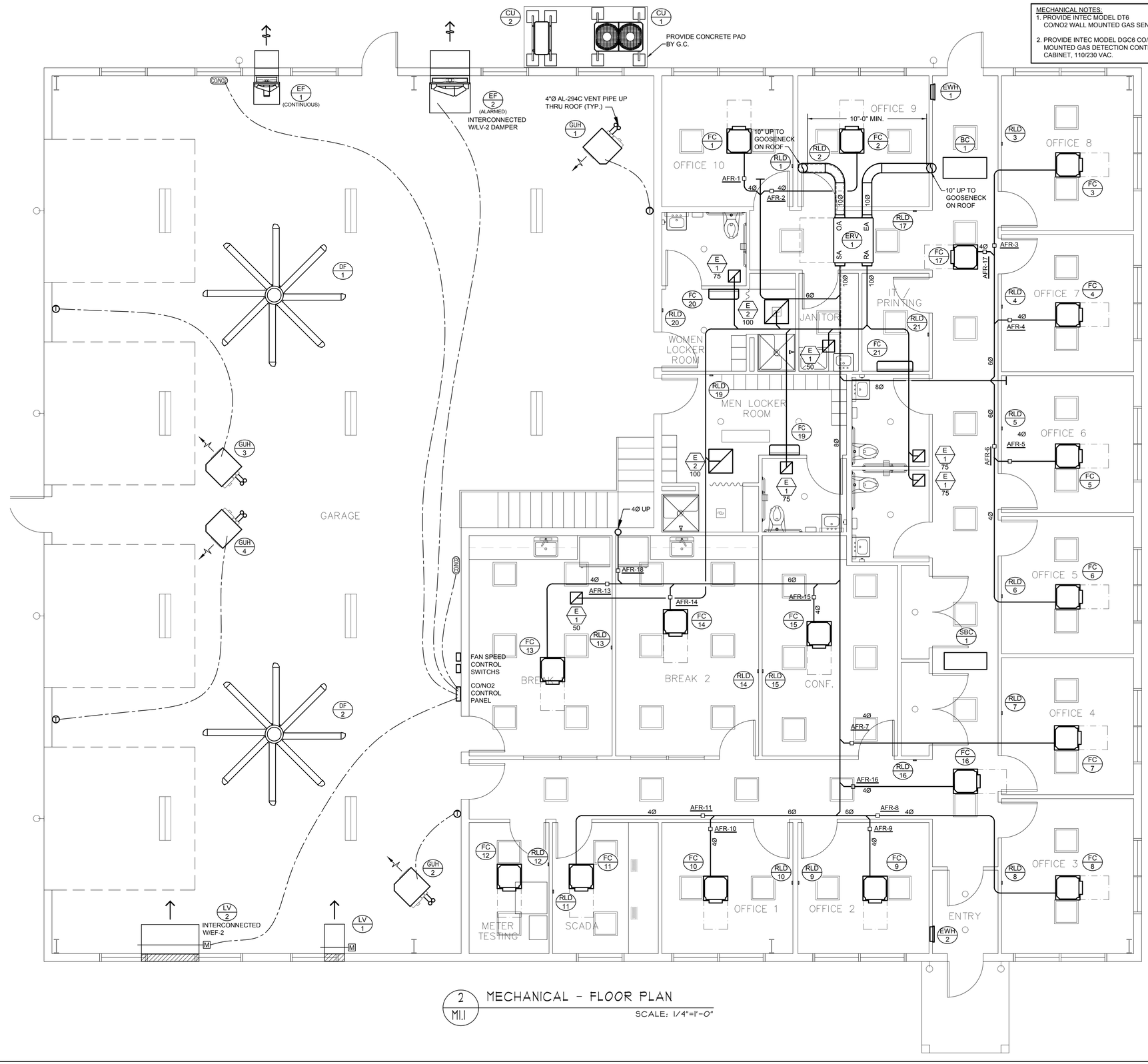
DATE: 08/07/2023
REVISED DATE:

M0.1



1 / M1.1 MECHANICAL -MEZZANINE PART PLAN

SCALE: 1/4"=1'-0"



2 / M1.1 MECHANICAL - FLOOR PLAN

SCALE: 1/4"=1'-0"

MECHANICAL NOTES:

1. PROVIDE INTEC MODEL DT6 CO/NO2 WALL MOUNTED GAS SENSORS.
2. PROVIDE INTEC MODEL DGC6 CO/NO2 WALL MOUNTED GAS DETECTION CONTROL CABINET, 110/230 VAC.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Inkhood Highway Smithfield, RI 02874
Tel (401) 765-1629 Fax (401) 765-2964

SHEET CONTENTS:

MECHANICAL FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

M1.1

MECHANICAL NOTES:
1. REFRIGERANT LINES SIZED PER MANUFACTURE'S RECOMMENDATIONS.
2. REFRIGERANT LINES SHOWN SINGLE LINE FOR CLARITY

ISSUED FOR BIDDING

TPYICAL RSL & RLL

CU 2
CU 1

OFFICE 10
OFFICE 9
OFFICE 8
OFFICE 7
OFFICE 6
OFFICE 5
OFFICE 4
OFFICE 3
OFFICE 2
OFFICE 1
GARAGE
WOMEN LOCKER ROOM
MEN LOCKER ROOM
JANITOR
IT / PRINTING
BREAK 1
BREAK 2
CONF.
METER TESTING
SCADA
ENTRY

FC 1, FC 2, FC 3, FC 4, FC 5, FC 6, FC 7, FC 8, FC 9, FC 10, FC 11, FC 12, FC 13, FC 14, FC 15, FC 16, FC 17, FC 19, FC 20, FC 21
BC 1
SBC 1
ERV 1

½" CND
1" CND
1¼" CND DN TO SINK
RSL/RLL UP
½" CND UP
C.O.

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Scarborough, ME 04074
tel (401) 783-7009 Fax (401) 783-7084

SHEET CONTENTS:

MECHANICAL REFRIGERANT PIPING PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

M3.1

GAS UNIT HEATER SCHEDULE (BASED ON REZNOR)

SYMBOL	MODEL	CFM	HEATING DATA						ELECTRICAL DATA				NOTES
			FUEL	MIN. INWG	INPUT MBH	OUTPUT MBH	EDB °F	LDB °F	HP	FLA	MOP	VOLTAGE	
GUH-1	UDX-45	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-2	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-3	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-4	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT. BY E.C., REFER TO ELEC. DWG.
2. PROVIDE HANGING BRACKETS & ISOLATORS.
3. PROVIDE ENCLOSED FAN MOTOR.
4. PROVIDE PROPANE CONVERSION KIT.
4. PROVIDE WALL MOUNTED THERMOSTATS.
5. MOUNT AT 12'-0" W/ LOUVERS SET TO 30".

EXHAUST FAN SCHEDULE (BASED ON GREENHECK)

SYMBOL	MODEL	TYPE	DRIVE	CFM	ESP (IN)	FAN RPM	MOTOR DATA			APROX. WEIGHT (LBS)	NOTES
							POWER	RPM	VOLTAGE		
EF-1	AER-20-VG	PROP	DIRECT	160	.25	599	1/4HP	925	120	61	1,2,5
EF-2	AER-36-VG	PROP	DIRECT	2,400	.25	917	3/4HP	1000	120	61	1,2,4,6

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
2. FAN TO BE INTERCONNECT WITH CO/NOX SYSTEMS.
3. FAN SHALL OPERATE CONTINUOUSLY. PROVIDE DIGITAL TIMECLOCK.
4. PROVIDE MOTOR GUARD ENCLOSURES.
5. PROVIDE GRAVITY DAMPER.
6. PROVIDE MOTORIZED DAMPER (120V).

AIR FLOW REGULATOR SCHEDULE (BASED ON ALDES)

SYMBOL	MODEL	TYPE	STATIC PRESSURE	CFM	SIZE	NOTES
AFR-1	CAR3	INLINE	.8	15	4Ø	
AFR-2	CAR3	INLINE	.8	15	4Ø	
AFR-3	CAR3	INLINE	.8	15	4Ø	
AFR-4	CAR3	INLINE	.8	15	4Ø	
AFR-5	CAR3	INLINE	.8	15	4Ø	
AFR-6	CAR3	INLINE	.8	15	4Ø	
AFR-7	CAR3	INLINE	.8	15	4Ø	
AFR-8	CAR3	INLINE	.8	15	4Ø	
AFR-9	CAR3	INLINE	.8	15	4Ø	
AFR-10	CAR3	INLINE	.8	15	4Ø	
AFR-11	CAR3	INLINE	.8	15	4Ø	
AFR-12	CAR3	INLINE	.8	15	4Ø	
AFR-13	CAR3	INLINE	.8	100	6Ø	
AFR-14	CAR3	INLINE	.8	100	6Ø	
AFR-15	CAR3	INLINE	.8	75	6Ø	
AFR-16	CAR3	INLINE	.8	30	4Ø	
AFR-17	CAR3	INLINE	.8	30	4Ø	
AFR-18	CAR3	INLINE	.8	25	4Ø	

ELECTRIC HEATER SCHEDULE (BASED ON INDEECO)

SYMBOL	MODEL	TYPE	CFM	KW	MBH	ELECTRICAL DATA		NOTES
						AMPS	VOLTAGE	
EWH-1	WCI	RECESSED, WALL	160	2.0	6.8	10.0	208/1/60	1, 2
EWH-2	WCI	RECESSED, WALL	160	1.5	5.2	12.9	120	1, 2

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
2. THERMOSTAT TO BE INTEGRAL TO THE UNIT.

LOUVER SCHEDULE (BASED ON GREENHECK)

SYMBOL	MODEL	TYPE	SIZE (in x in)	FREE AREA (ft^2)	CFM	SP LOSS (inwg)	NOTES
LV-1	ESJ-401	INTAKE	20x12	35.1	160	0.03	1,2,3
LV-2	ESJ-401	INTAKE	40x40	51.8	2,400	0.03	1,2,3

NOTES:
1. PROVIDE WITH BIRDSCREEN.
2. MOTORIZED DAMPERS (120V) TO BE INTERCONNECTED WITH EXHAUST FANS.
3. COLOR FINISH BY OWNER/ARCHITECT.

REFRIGERANT LEAK DETECTOR

SYMBOL	MANUFACTURER	MODEL	AMPS	VOLTAGE	NOTES
RLD-1	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-2	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-3	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-4	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-5	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-6	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-7	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-8	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-9	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-10	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-11	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-12	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-13	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-14	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-15	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-16	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-17	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-18	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-19	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-20	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-21	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6

NOTES:
1. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. SENSOR SHALL INCLUDE ONBOARD ARLARM RELAYS, AUDIBLE HORN, & LED'S.
3. UNIT SHALL BE RECESSED IN WALL WITHIN A STANDARD 2-GANG ELECTRICAL BOX.
4. UNIT SHOULD BE MOUNTED APPROXIMATELY 12" TO 18" ABOVE FINISHED FLOOR.
5. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
6. PROVIDE WITH ALARM BUZZER (76dB) AT 10'.

VRF INDOOR UNIT SCHEDULE (BASED ON MITSUBISHI)

SYMBOL	CONDENSER SYMBOL	BRANCH CONTROLLER	MODEL	UNIT TYPE	NOMINAL CAPACITY (TONS)	AIRFLOW CFM	O.A. FLOW CFM	COOLING DATA	HEATING DATA	ELECTRICAL DATA			NOTES
								TOTAL MBH	TOTAL MBH	MCA	MOP	VOLTAGE	
FC-1	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-2	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-3	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-4	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-5	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-6	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-7	CU-1	BC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-8	CU-1	SBC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	15	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-9	CU-1	SBC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-10	CU-1	SBC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-11	CU-1	SBC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-12	CU-1	SBC-1	PLFY-P05NFMU-E	CASSETTE	.5	230	15	5.0	5.6	0.24	15	208/1/60	1,2,3,5
FC-13	CU-1	BC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	100	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-14	CU-1	BC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	100	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-15	CU-1	BC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	75	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-16	CU-1	SBC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	30	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-17	CU-1	BC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	30	8.0	9.0	0.30	15	208/1/60	1,2,3,5
FC-18	CU-1	BC-1	PLFY-P08NFMU-E	CASSETTE	.8	265	25	8.0	9.0	0.20	15	208/1/60	1,2,3,4,5
FC-19	CU-1	BC-1	PKFY-PO4NLMU-E	WALL	.4	125	-	4.0	4.6	0.20	15	208/1/60	1,2,3,4, 5
FC-20	CU-1	BC-1	PKFY-PO4NLMU-E	WALL	.4	125	-	4.0	4.6	0.20	15	208/1/60	1,2,3,4, 5

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, CONTROLS WIRING, AND ALL INSTALLATION INSTRUCTIONS.
3. PROVIDE WITH SPACE MOUNTED THERMOSTAT.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMPS.
5. PROVIDE AE-200 CENTRAL CONTROLLER.

ENERGY RECOVERY VENTILATOR SCHEDULE (BASED ON LOSSNAY)

SYMBOL	MODEL	DESIGN CONDITIONS				OUTDOOR AIR		EXHAUST AIR		ELECTRICAL DATA			APROX. WEIGHT (LBS)	NOTES
		SUMMER		WINTER										
		OUTDOOR	INDOOR	OUTDOOR	INDOOR	CFM	ESP	CFM	ESP	MCA	MOP	VOLTAGE		
		DB°F/WB°F	DB°F/RH%	DB°F/WB°F	DB°F/RH%									
ERV-1	LGH-F600RVX2-E	95.0/78.0	73.0/50	0.0/-1.7	72.0/35.0	600	.8	600	.8	5.2	15	208/1/60	123	1,2,3,4

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE WITH DOUBLE WALL CONSTRUCTION & HANGING ISOLATORS.
3. PROVIDE MERV 8 FILTERS.
4. UNIT SHALL BE INTERLOCKED WITH AE-200 CONTROLLER.

VRF HEAT PUMP SCHEDULE (BASED ON MITSUBISHI)

SYMBOL	LOCATION	MODEL	NOMINAL CAPACITY (MBH)		EFFECIENCIES			ELECTRICAL DATA			NOTES
			COOLING	HEATING	IEER	EER	COP	MCA	MOP	VOLTAGE	
CU-1	GRADE	PURY-EP120TNU-A	120.0	135.0	27.55	13.2	3.875	41/38	60/60	208/3/60	1,2,3,4,5

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, AND ALL INSTALLATION INSTRUCTIONS.
3. PROVIDE WIND BAFFLES GUARDS FOR LOW AMBIENT CONTROLS.
4. PROVIDE 18" EQUIPMENT STAND.
5. REFER TO PIPING DIAGRAM FOR ADDITIONAL INFORMATION.

BRANCH CONTROLLER SCHEDULE (BASED ON MITSUBISHI)

SYMBOL	MODEL	TYPE	ASSOCIATED HEAT PUMP	ASSOCIATED MAIN CONTROLLER	CONNECTED CAPACITY (MBH)	PORTS	ELECTRICAL DATA			NOTES
							MCA	MOP	VOLTAGE	
BC-1	CMB-P1016NU-JA1	MAIN	CU-1		119.0	16	1.57	20	208/1/60	1,2,3,4,5
SBC-1	CMP-P108NU-KB1	SUB	CU-1	BC-1	36.0	8	0.7	20	208/1/60	1,2,3,4,5

NOTES:
1. PROVIDE WITH DISCONNECT. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE WITH FULL PORT BALL VALVES.
3. PROVIDE WITH SECONDARY DRIP PANS.
4. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, CONTROLS WIRING, AND ALL INSTALLATION INSTRUCTIONS.
5. CONNECTED CAPACITY INCLUDES ANY ASSOCIATED SUB CONTROLLERS.

SPLIT HEAT PUMP SCHEDULE (BASED ON MITSUBISHI)

SYMBOL	MODEL	CFM	COOLING MBH	HEATING MBH	ELECTRICAL DATA					NOTES
					KW	FAN FLA	MCA	MAX. FUSE	VOLTAGE	
FC-21	PKA-A12LA	385	12.0	9.1	.5	0.26	1.0	-	208/1/60	1,2,3

SYMBOL	MODEL	FAN FLA	COMP RLA	COMP LRA	NOMINAL MBH	ELECTRICAL DATA					NOTES
						SEER	COP	MCA	MAX. FUSE	VOLTAGE	
CU-2	PUZ-A12NKA7	0.5	7	12.0	12.0	21.0	10.2	11.0	28	208/1/60	1,3,4,5

NOTES:
1. PROVIDE DISCONNECT. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE SPACE MOUNTED THERMOSTAT AND FACTORY CONDENSATE PUMP.
3. INDOOR UNIT IS POWERED THROUGH THE OUTDOOR UNIT.
4. PROVIDE EQUIPMENT SUPPORT STAND.
5. PROVIDE LOW AMBIENT KIT AND WIND BAFFLE.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ENGINEERING DESIGN SERVICES INCORPORATED
141 Dyerville Highway Smithfield, RI 02896
tel (401) 765-1828 Fax (401) 765-2964

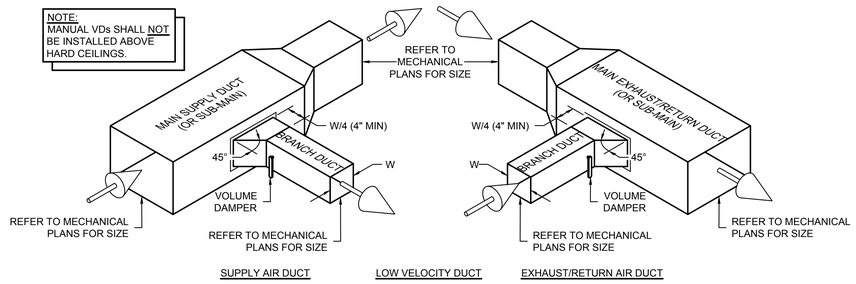
SHEET CONTENTS:

MECHANICAL SCHEDULES

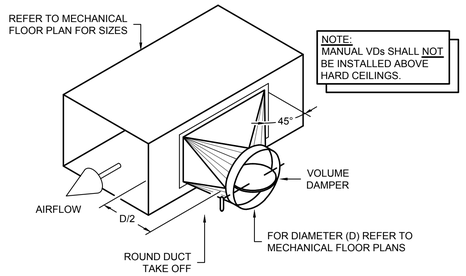
PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

M4.1



BRANCH DUCT CONNECTIONS
NTS



ROUND DUCT TAKE OFF DETAIL
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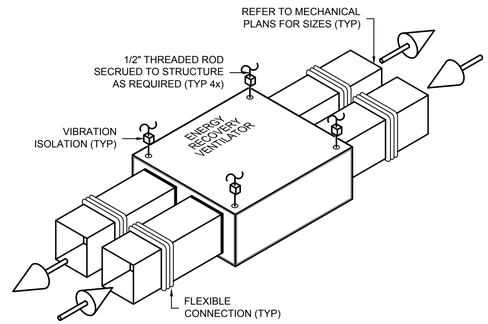

HANGING ERV DETAIL
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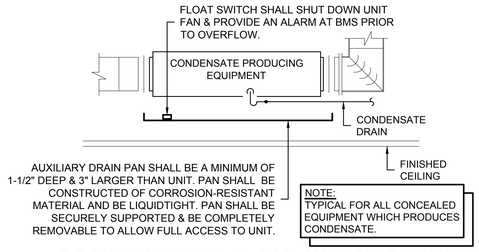
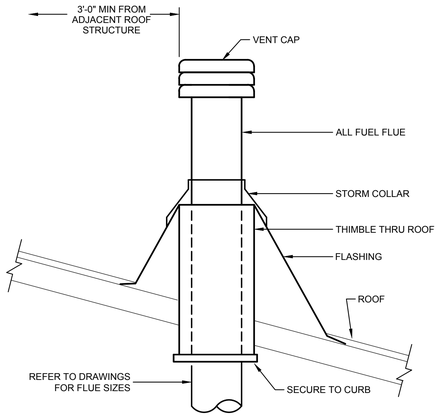


DRAIN PAN WITH FLOAT SWITCH DETAIL
NTS



GAS FLUE DETAIL
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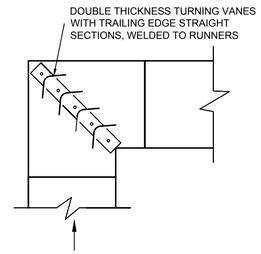
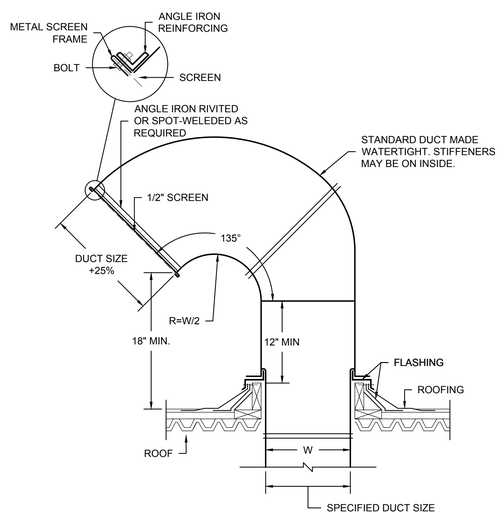
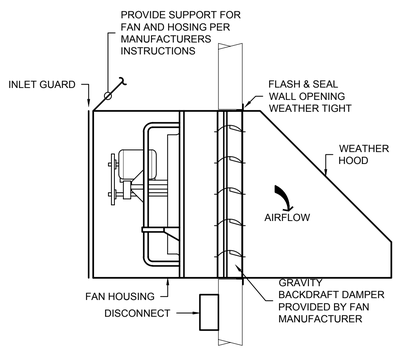


TYPICAL SQUARE ELBOW
NTS



GOOSENECK DETAIL
NTS



SIDEWALL EXHAUST FAN DETAIL
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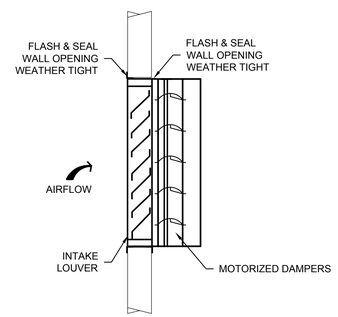
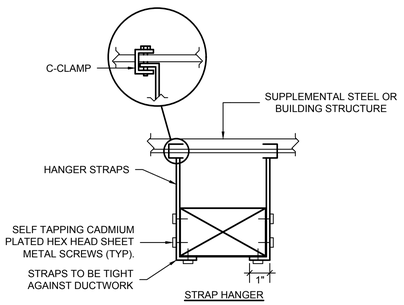


SIDEWALL INTAKE VENT DETAIL
NO SCALE



NOTE:
NO POP RIVETS ALLOWED, USE SELF-TAPPING SHEETMETAL SCREWS ONLY.

HANGER SIZES*			
MAX. SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	1"x18" GAUGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROD	1-1/2"x1-1/2"x1/8"	8'-0"
48"	1/4" ROD	2"x2"x1/8"	8'-0"
60"	5/16" ROD	2"x2"x1/8"	8'-0"
84"	3/8" ROD	2"x2"x1/8"	8'-0"

* FOR RECTANGULAR DUCTS

DUCT HANGER DETAIL
NTS

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Foxborough, MA 02024
tel (401) 765-3509 fax (401) 765-0964

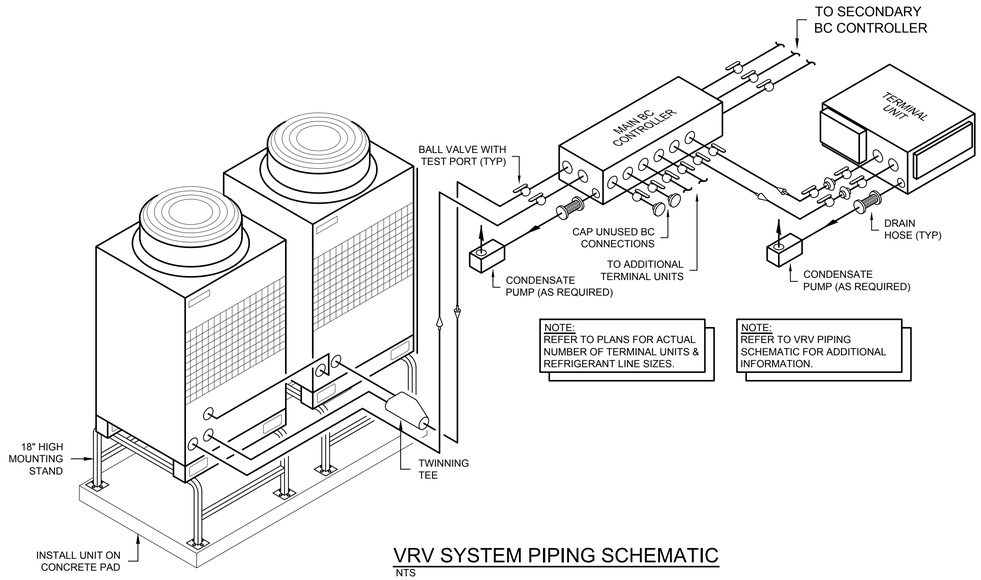
SHEET CONTENTS:

MECHANICAL DETAILS

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

M5.1

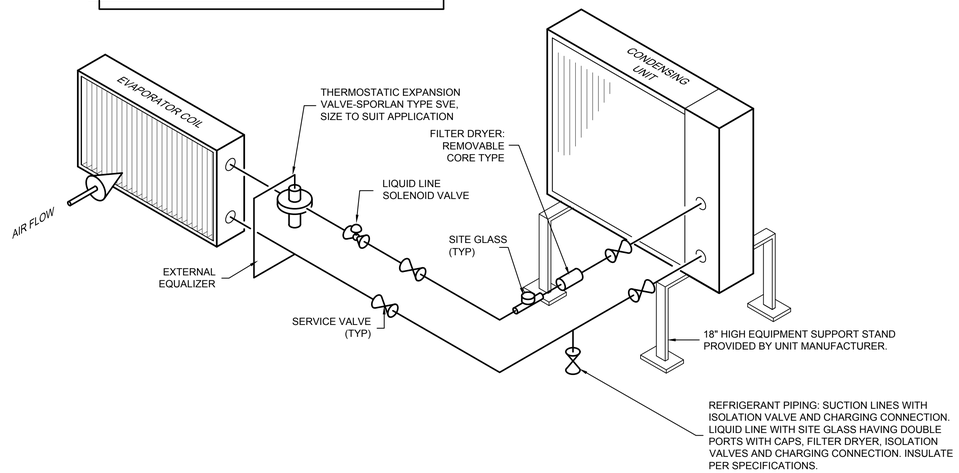


NOTE:
REFER TO PLANS FOR ACTUAL NUMBER OF TERMINAL UNITS & REFRIGERANT LINE SIZES.

NOTE:
REFER TO VRV PIPING SCHEMATIC FOR ADDITIONAL INFORMATION.

VRV SYSTEM PIPING SCHEMATIC
NTS

NOTE:
ACTUAL PIPING ACCESSORIES AND ARRANGEMENT MAY VARY ACCORDING TO MANUFACTURER AND SYSTEM TYPE.
FINAL CONFIGURATION SHALL BE VERIFIED WITH MANUFACTURER INSTALLATION INSTRUCTIONS PRIOR TO BID AND INSTALLATION.



REFRIGERANT PIPING DIAGRAM
NTS

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerset, RI 02834
Tel (401) 510-1001 Fax (401) 510-2084

SHEET CONTENTS:

MECHANICAL DETAILS

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

M5.2

Woonsocket Water Division

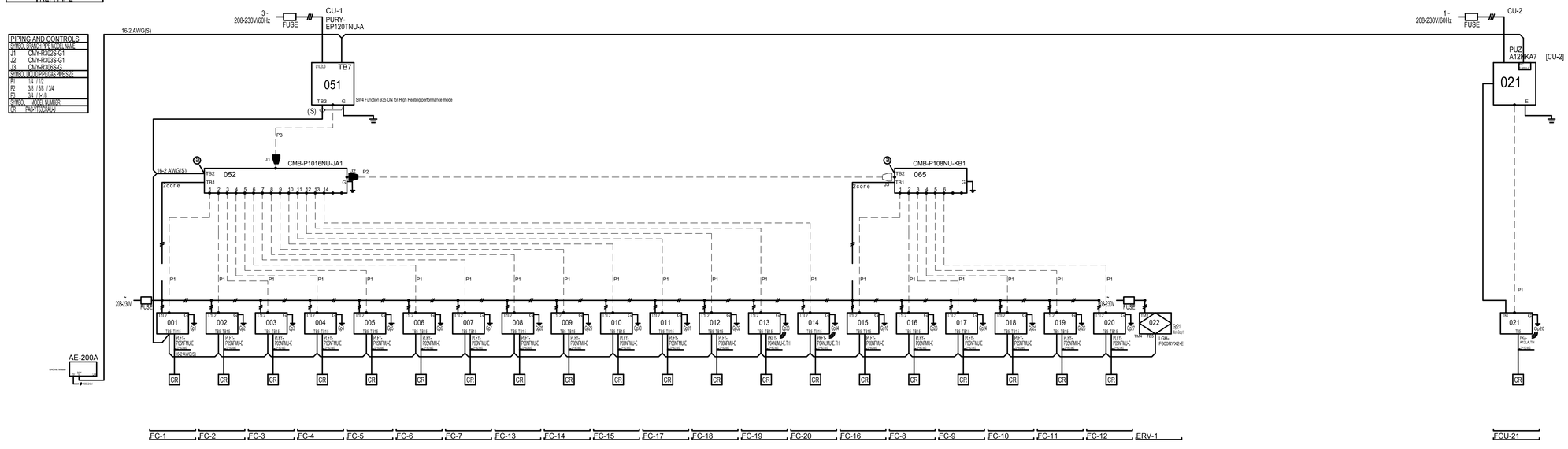
DIAGRAM SYMBOL LEGEND	CONT.No	PAGE
DISPLAY	DESCRIPTION	
	POWER WIRE	
	CONTROL WIRE	
	REF. PIPE	

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm(16 AWG) : 1.25mm(16 AWG) or more. 0.75mm(20 AWG) : between 0.5mm(24 AWG) and 0.75mm(20 AWG)

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODE NAME
J1	CMY-R3022S-G1
J2	CMY-R3033S-G1
J3	CMY-R3065-G
SYMBOL	MULTI CONNECTION PIPE SIZE
P1	9.5 / 15.9
P2	19.1 / 28.6
P3	9.5 / 12.7
SYMBOL	MODEL NUMBER
CR	PAC-IT352CRA-J



WIRING DEVICE LEGEND

	DUPLEX CONVENIENCE OUTLET; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	18" A.F.F.
	DUPLEX CONVENIENCE OUTLET; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	42" A.F.F. OR 6" ABOVE COUNTER
	DUPLEX CONVENIENCE OUTLET; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE WITH GROUND FAULT PROTECTION.	18" A.F.F.
	DUPLEX CONVENIENCE OUTLET; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE WITH GROUND FAULT PROTECTION.	42" A.F.F. OR 6" ABOVE COUNTER
	SPECIAL NEMA CONFIGUATION OUTLET; VERIFY NEMA TYPE WITH EQUIPMENT TO BE SERVED.	--
	QUADRUPLEX CONVENIENCE OUTLET; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	18" A.F.F.
	DUPLEX CONVENIENCE OUTLET IN FLOOR BOX; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	FLOOR
	DUPLEX CONVENIENCE OUTLET IN CEILING; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	CEILING
	QUAD-RUPLEX CONVENIENCE OUTLET IN FLOOR BOX; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	FLOOR
	QUAD-RUPLEX CONVENIENCE OUTLET IN CEILING; 125 VOLT, 20 AMPERE, U-SLOT GROUNDING TYPE.	CEILING
J	JUNCTION BOX; SIZE AS REQUIRED PER CODE.	--
R	RELAY; REFER TO PLANS FOR RATINGS.	--
C	CONTACTOR; REFER TO PLANS FOR RATINGS.	--
TC	TIMECLOCK; REFER TO DETAILS ON PLANS.	--
	MOTOR; REFER TO PLANS FOR DETAILS.	--
60/50	FUSED DISCONNECT SWITCH. 60/50 INDICATES FRAME SIZE/FUSE SIZE IN THAT ORDER. STARTERS FOR HVAC EQUIPMENT BY MECHANICAL CONTRACTOR.	--
	SURFACE MOUNTED PANELBOARD; 208Y/120V, 3-PHASE, 4-WIRE. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.	MOUNT 6'-6" AFF TO TOP BREAKER.
	RECESSED MOUNTED PANELBAORD; 208Y/120V, 3-PHASE, 4-WIRE. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.	MOUNT 6'-6" AFF TO TOP BREAKER.
	SURFACE MOUNTED PANELBOARD; 480Y/1277V, 3-PHASE, 4-WIRE. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.	MOUNT 6'-6" AFF TO TOP BREAKER.
	RECESSED MOUNTED PANELBAORD; 480Y/1277V, 3-PHASE, 4-WIRE. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.	MOUNT 6'-6" AFF TO TOP BREAKER.
	GROUNDING CONDUCTOR / MEANS & METHOD; IN ACCORDANCE WITH THE *"NATIONAL ELECTRIC CODE"*, (NEC). REFER TO PLANS FOR SIZING.	
P	RECESSED FLOOR-BOX POKE-THRU WITH POWER FURNITURE FEED (MINIMUM 1" CONDUIT). REFER TO DETAIL ON DRAWING E307.	FLOOR
C	RECESSED FLOOR-BOX POKE-THRU WITH COMMUNICATIONS FURNITURE FEED (MINIMUM 2" CONDUIT). REFER TO DETAIL ON DRAWING E307.	FLOOR

NOTES:

1. DEVICES WITH THE FOLLOWING SUBSCRIPTS SHALL BE PROVIDED & UL LISTED TO BE INSTALLED / WIRED AS NOTED:
   - H - HOSPITAL GRADE
   - IG - ISOLATED GROUND
   - T - TAMPER RESISTANT
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE G.C. FOR WALLS BEING FURRED-OUT WITH SHEETROCK DRYWALL SO OUTLET BOXES & DEVICES CAN BE INSTALLED FLUSH WITHIN THE WALLS. (TYPICAL)
3. ALL RECEPTACLES SHALL BE PROVIDED WITH AN ADHERED, TYPED LABEL INDICATING PANEL NAME AND CIRCUIT NUMBER. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
4. ALL RECEPTACLES WITH A DEDICATED CIRCUIT SHALL BE LABELED WITH PANEL NAME AND CIRCUIT NUMBER AS INDICATED IN NOTE #3 AS WELL AS LABELED "DEDICATED".
5. ALL COLORS OF RECEPTACLES AND ASSOCIATED FACEPLATES TO BE CONFIRMED WITH OWNER'S REPRESENTATIVE AND LOCAL (AHJ) PRIOR TO ANY SUBMITTALS, PURCHASE AND/OR INSTALLATION OF EQUIPMENT. THIS REQUIREMENT AS INDICATED IN NOTE #11 SHALL BE CORRECTED AS REQUIRED.
6. ALL TYPES AND LOCATIONS OF RECEPTACLES TO BE CONFIRMED WITH OWNER'S REPRESENTATIVE AND LOCAL (AHJ) PRIOR TO ANY SUBMITTALS, PURCHASE AND/OR INSTALLATION OF EQUIPMENT. FAILURE OF THIS REQUIREMENT AS INDICATED IN NOTE #3 SHALL BE CORRECTED AS REQUIRED.
7. ANY CONFLICT WITH RECEPTACLE LOCATIONS, TYPES OF RECEPTACLES OR COLORS OF RECEPTACLES WITH OWNER'S REPRESENTATIVE OR WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, AND GENERAL CONTRACTOR TO PROVIDE ALL ADDITIONAL WORK AND EXPENSES TO REPAIR AND CORRECT. NO ADDITIONAL REIMBURSEMENTS OR TIME OF COMPLETION FOR WORK WILL BE ALLOWED.
8. ALL RECEPTACLES LOCATED WITHIN HEATHCARE FACILITIES SHALL BE PROVIDED WITH AN ILLUMINATED FACE, OR INDICATOR LIGHT.
9. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH LOCAL (AHJ) FOR ALL INSTALLATIONS AND REQUIREMENTS.

LIGHTING CONTROL LEGEND

SYMBOL	DESCRIPTION	MOUNTING
SM	MANUAL MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERLOADS.	48" A.F.F.
Sa	SINGLE POLE SWITCH; "a" INDICATES LIGHTING FIXTURES CONTROLLED.	48" A.F.F.
S3a	THREE-WAY SWITCH; "a" INDICATES LIGHTING FIXTURES CONTROLLED.	48" A.F.F.
WS	WALL SWITCH VACANCY SENSOR (MANUAL "ON" AND AUTOMATIC "OFF") INSTALL PER MANUFACTURERS INSTRUCTIONS.	48" A.F.F.
SK	KEYED SWITCH; REFER TO PLANS FOR NUMBER OF POLES AND FIXTURES CONTROLLED	48" A.F.F.
PC	PHOTOCELL	-
MS	ULTRASONIC VACANY SENSOR 360-DEGREES CAPABILITY. PROVIDE POWER PACK & WIRE PER MANUFACTURERS INSTRUCTIONS FOR MANUAL "ON" WITH WALL LOW VOLTAGE SWITCH AND AUTOMATIC "OFF" WITH SENSOR. SET DELAY TIMES FOR 15 MINUTES.	CEILING
PP	POWER PACK FOR "MS" VACANCY SENSORS. WIRE PER MANUFACTURERS INSTRUCTIONS FOR MANUAL "ON" WITH WALL LOW VOLTAGE SWITCH AND AUTOMATIC "OFF" WITH SENSOR.	-
DH	CEILING MOUNTED DAY-LIGHT HARVESTING SENSOR. VERIFY MOUNTING AND LOCATION FOR OPTIMAL CONTROL.	CEILING

NOTES:

- E.C. SHALL FURNISH AND INSTALL ALL DEVICES AND ACCESSORIES FOR A COMPLETE LIGHTING CONTROL INSTALLATION.
- COORDINATE EXACT REQUIREMENTS FOR INSTALLATION WITH LIGHTING CONTROL REPRESENTATIVE.
- PROVIDE ALL LOW VOLTAGE CABLING REQUIRED FOR CONTROLS.

SEISMIC RESTRAINT NOTE

A. GENERAL: IT IS THE INTENT OF THIS SEISMIC SPECIFICATION TO KEEP ALL ELECTRIAL BUILDING SYSTEM COMPONENTS IN PLACE DURING A SEISMIC EVENT. ALL ELECTRICAL SYSTEMS MUST BE INSTALLED IN STRICT ACCORDANCE WITH SEISMIC CODES, COMPONENT MANUFACTURER'S AND BUILDING CONSTRUCTION STANDARDS. WHENEVER A CONFLICT OCCURS BETWEEN THE MANUFACTURER'S OR CONSTRUCTION STANDARDS, THE MOST STRINGENT SHALL APPLY.

B. SEISMIC RESTRAINTS SHALL BE DESIGNED IN ACCORDANCE WITH SEISMIC FORCE LEVELS AS DETAILED IN THE APPLICABLE BUILDING CODE.

1. ALL EQUIPMENT, CONDUIT AND PULL BOXES SHALL BE ADEQUATELY RESTRAINED TO RESIST SEISMIC FORCES. RESTRAINT DEVICES SHALL BE DESIGNED AND SELECTED TO MEET SEISMIC REQUIREMENTS AS DEFINED IN THE LATEST ISSUE OF THE BOCA NATIONAL BUILDING CODE IN ACCORDANCE WITH THE APPLICABLE SEISMIC ZONE.
2. ANCHOR BOLT CALCULATORS, SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED SHOWING ADEQUACY OF THE BOLT SIZING AND TYPE. STAMPED CALCULATIONS SHALL ALSO BE FURNISHED FOR ANCHORS ON RESTRAINT DEVICES, CABLES, ISOLATORS AND RIGIDLY MOUNTED EQUIPMENT.

TYPICAL FIRE STOPPING NOTES

A. GENERAL: FIRE STOPPING SHALL BE PROVIDED BY THIS CONTRACTOR FOR ALL FLOOR, CEILING AND FIRE RATED WALL PENETRATIONS FOR CONDUIT, SLEEVES AND/OR CABLING AS REQUIRED BY JOB CONDITIONS.

B. THE CONTRACTOR SHALL PROVIDE A FIRE STOP SYSTEM IN ACCORDANCE WITH THE FOLLOWING:

1. THE SYSTEM SHALL CONSIST OF A WATERBASED SEALANT AND SUITABLE DAMMING MATERIALS (WHERE REQUIRED) AND BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
2. THE SEALANT SUPPLIED SHALL BE A TWO STAGED INTUMESCENT AND CAPABLE OF EXPANDING UP TO 8 TIMES ITS ORIGINAL VOLUME.
3. THE SEALANT SUPPLIED SHALL CONTAIN NO ASBESTOS, NO FIBERGLASS, AND NO SOLVENTS NOT CORROSIVE MINERAL SALTS OF ANY KIND.
4. THE SEALANT SHALL FORM A SURFACE CAPABLE OF BEING SANDED AND PAINTED TO MATCH SURROUNDING SURFACES AND SHALL BE IMPERVIOUS TO WATER WHEN DRY.
5. THE FIRE STOP SYSTEM SHALL BE TESTED TO THE TIME/TEMPERATURE REQUIREMENTS OF ASTM E119 AND SHALL BE UL1479 (ASTM E814) AND CLASSIFIED FOR UP TO 3 HOURS.
6. THE FIRE STOP SEALANT SHALL BE SPECSEAL SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC. OR APPROVED EQUAL.
7. SPECIAL CARE SHALL BE TAKEN WITH ELECTRICAL SYSTEMS NOT TO COMPROMISE ANY OF THE BUILDING FIRE PARTITIONS, FLOORS, WALLS OR MEMBRANES. PROVIDE ALL FIRESTOPPING REQUIRED TO COMPLY WITH THE BUILDING CODE, THE ELECTRICAL CODE AND THE UL LISTING OF EACH ASSEMBLY. COORDINATE LOCATIONS AND TYPES OF MEMBRANES WITH ARCHITECT.

ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
AMPS	AMPERES
AFF	ABOVE FINISHED FLOOR
A/C	AIR CONDITIONING
AWG	AMERICAN WIRE GAGE
C	CONDUIT
C/B	CIRCUIT BREAKER
CF	COMPACT FLUORESCENT
CLG	CEILING
℄	CENTERLINE
DN	DOWN
DWG	DRAWING
E.C.	ELECTRICAL CONTRACTOR
EQ	EQUAL
ETR	EXISTING TO REMAIN
ER	EXISTING TO BE REMOVED
ERL	EXISTING TO BE RE-LOCATED
F.A.	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLR	FLOOR
G.C.	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERUPTER.
G	GROUND
GND	GROUND
HVAC	HEATING, VENTILATING, & & AIR CONDITIONING
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LTG	LIGHTING
MAX	MAXIMUM
M.C.	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MIN	MINIMUM
MTD	MOUNTED
NAC	F.A. NOTIFICATION APPLIANCE CIRCUIT EXPANDER PANEL
NEC	NATIONAL ELECTRICAL CODE
NTS	NOT TO SCALE
P	POLE
P.C.	PLUMBING CONTRACTOR
PNL	PANEL
RE	RE-LOCATED DEVICE OR EQUIPMENT SHOWN IN NEW LOCATION
TYP	TYPICAL
UL	UNDERWRITERS LABATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
W	WATTS
WP	WEATHER-PROOF

RECEPTACLE BRANCH CIRCUIT WIRING SCHEDULE

CONDUCTOR AWG.	MAXIMUM CONDUCTOR LENGTH AT 120V	GROUND CONDUCTOR AWG.
#12	100'-0"	#12
#10	165'-0"	#10
#8	255'-0"	#10
#6	405'-0"	#10

RECEPTACLE BRANCH CIRCUIT WIRING SCHEDULE NOTES:

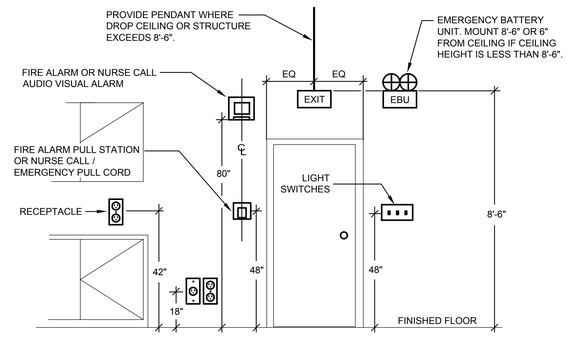
1. BASED ON 20A CIRCUIT LOADED TO 9A USING SINGLE PHASE, 2 WIRE CIRCUITS.
2. THE ABOVE SCHEDULE REPRESENTS MINIMUM CONDUCTOR SIZE BASED FROM PANEL TO CENTER OF LEAD TO OVERCOME VOLTAGE DROP.
3. MAKE PROVISIONS FOR JUNCTION BOX ADJACENT TO OUTLET TO TRANSITION TO #12 WIRE FOR FINAL TERMINATIONS TO DEVICE AS REQUIRED.

LUMINAIRE BRANCH CIRCUIT WIRING SCHEDULE

CONDUCTOR AWG.	MAXIMUM CONDUCTOR LENGTH AT 120V	MAXIMUM CONDUCTOR LENGTH AT 277V	GROUND CONDUCTOR AWG.
#12	75'-0"	175'-0"	#12
#10	120'-0"	285'-0"	#10
#8	190'-0"	445'-0"	#10
#6	300'-0"	-	#10

LUMINAIRE BRANCH CIRCUIT WIRING SCHEDULE NOTES:

1. BASED ON 20A CIRCUIT LOADED TO 12A USING SINGLE PHASE, 2 WIRE CIRCUITS.
2. THE ABOVE SCHEDULE REPRESENTS MINIMUM CONDUCTOR SIZE BASED FROM PANEL TO CENTER OF LEAD TO OVERCOME VOLTAGE DROP.
3. MAKE PROVISIONS FOR JUNCTION BOX ADJACENT TO OUTLET TO TRANSITION TO #12 WIRE FOR FINAL TERMINATIONS TO DEVICE AS REQUIRED.



NOTE:
THIS DETAIL INDICATES CENTERLINE FOR FIRE ALARM/PULL STATION SWITCHES AND RECEPTACLES. HOWEVER THIS SAME CENTERLINE PRINCIPLE SHALL BE FOR ALL GROUP MTD. ELECTRICAL DEVICES. IF FIRE ALARM IS ON SAME SIDE OF DOOR AS SWITCHES, PULL STATION SHALL BE HORIZONTALLY SEPARATED BY A MINIMUM OF 18". THIS ELEVATION IS A GENERAL ARRANGEMENT OF OF DEVICES. ARCHITECT PLANS TAKE PRECEDENCE FOR EXACT LOCATIONS.

MOUNTING HEIGHT DETAIL

NOT TO SCALE

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerset, MA 02726
Tel: (401) 763-1629 Fax: (401) 763-2904

SHEET CONTENTS:

ELECTRICAL LEGENDS & NOTES

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E0.1

TELEPHONE & DATA RACEWAY NOTES

1. NO SECTION OF CONDUIT SHALL BE LONGER THAN 100-FEET BETWEEN PULL POINTS.
2. NO SECTION OF CONDUIT SHALL CONTAIN MORE THAN TWO 90-DEGREE BENDS, OR EQUIVALENT, BETWEEN PULL POINTS (e.g., OUTLET BOXES, TELECOMMUNICATIONS CLOSETS, OR PULL BOXES). IF THERE IS A REVERSE (U-SHAPED) BEND IN THE SECTION, A PULL BOX SHALL BE INSTALLED.
3. THE INSIDE RADIUS OF A BEND IN CONDUIT SHALL BE AT LEAST 6 TIMES THE INTERNAL DIAMETER. BENDS IN THE CONDUIT SHALL NOT CONTAIN ANY KINKS OR OTHER DISCONTINUITIES THAT MAY HAVE A DETRIMENTAL EFFECT ON THE CABLE SHEATH DURING CABLE PULLING OPERATIONS.
4. ANY SINGLE CONDUIT RUN EXTENDING FROM A TELECOMMUNICATIONS CLOSET SHALL NOT SERVE MORE THAN THREE OUTLET BOXES.
5. CONDUITS PROTRUDING / PENETRATING THROUGH THE FLOOR IN THE TELECOMMUNICATIONS CLOSETS SHALL BE TERMINATED 3-INCHES ABOVE THE FLOOR ADJACENT WALLS. PROTRUSIONS / PENETRATIONS SHALL BE LOCATED TO AVOID CREATING A TRIPPING HAZARD WITHIN THE CLOSETS. FIRESTOP ALL PROTRUSIONS / PENETRATIONS.
6. A MINIMUM 3/4-INCH CONDUIT SHALL BE PROVIDED FROM THE TELECOMMUNICATIONS CLOSET TO SERVE EACH WALL-MOUNTED PUBLIC TELEPHONE. IN DISCUSSION WITH THE TELEPHONE PROVIDER, AND WHERE IT IS DESIRABLE TO CONCEAL THE OUTLET BOX DIRECTLY BEHIND THE TELEPHONE, THE CENTER OF THE OUTLET BOX SHALL BE LOCATED 48-INCHES ABOVE THE FINISHED FLOOR. FOR RECESSED APPLICATIONS, THE CONDUIT AND BOX SHALL BE INSTALLED TO SUIT THE SPECIFIC TYPE OF MOUNTING. REFER TO APPLICABLE CODES, ADA GUIDELINES, UNIFORM FEDERAL ACCESSIBILITY STANDARDS, MANUFACTURES SPECIFICATIONS AND ANSI STANDARDS FOR ADDITIONAL REQUIREMENTS.
7. WHERE A TELECOMMUNICATIONS CONDUIT IS TO BE INSTALLED TO A DEVICE EXPOSED TO THE WEATHER, CARE SHALL BE TAKEN TO PREVENT THE INGRESS OF MOISTURE. CARE SHALL ALSO BE TAKEN TO ENSURE THAT MOISTURE WILL NOT COLLECT IN LOW POINTS, FREEZE AND DAMAGE THE CABLE. NONMETALLIC CONDUIT SHALL BE UV RESISTANT AND MARKED ACCORDINGLY.
8. CONDUITS SHALL BE REAMED TO ELIMINATE SHARP EDGES. METALLIC CONDUIT SHALL BE TERMINATED WITH AN INSULATED BUSHING.
9. REFER TO ANSI/TIA/EIA-606 FOR ADMINISTRATION OF THE CONDUIT SYSTEM IDENTIFICATION.
10. ALL CONDUITS SHALL BE PROVIDED WITH PULL STRINGS.
11. OUTLET BOXES SHALL BE NO SMALLER THAN 2-INCHES WIDE, 3-INCHES HIGH AND 2.5-INCHES DEEP. THIS WILL ACCOMODATE ONE OR TWO 3/4-INCH CONDUITS. WHERE A LARGER CONDUIT IS REQUIRED, THE BOX SHALL BE INCREASED ACCORDINGLY. A MAXIMUM 1-1/4-INCH CONDUIT WILL REQUIRE A 4-11/16-INCH x 4-11/16-INCH x 2-1/2-INCH BOX.
12. CONDUIT TYPES SHALL BE ELECTRICAL METALLIC TUBING (EMT) OR RIGID METAL CONDUIT. LOCATIONS SUBJECT TO MOISTURE SHALL BE RIGID PVC. FLEXIBLE CONDUIT SHALL NOT BE USED FOR TELE/DATA RACEWAYS.
13. CONDUIT REQUIREMENTS FOR SUPPORT, END PROTECTION AND CONTINUITY SHALL COMPLY WITH APPROPRIATE ELECTRICAL CODES.
14. CONDUIT AND BOXES FOR TELE/DATA WIRING SHALL BE DEDICATED TO THOSE SYSTEMS. POWER WIRING SHALL BE KEPT OUT OF CONDUIT AND BOXES DEDICATED TO TELE/DATA WIRING.
15. CONDUIT SIZE FOR MAXIMUM NUMBER OF CABLES (SEE TABLE BELOW):

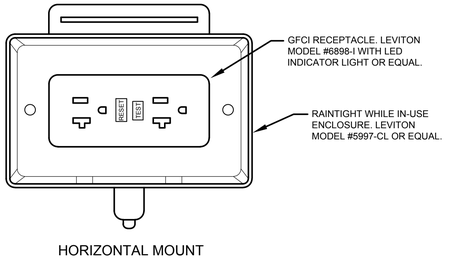
Conduit Trade Size	Maximum number of cables based upon allowable fill									
	Cable Outside Diameter in Inches									
	0.13	0.18	0.22	0.24	0.29	0.31	0.37	0.53	0.62	0.70
1/2"	1	1	0	0	0	0	0	0	0	0
3/4"	6	5	4	3	2	2	1	0	0	0
1"	8	8	7	6	3	3	2	1	0	0
1-1/4"	16	14	12	10	6	4	3	1	1	1
1-1/2"	20	18	16	15	7	6	4	2	1	1
2"	30	26	22	20	14	12	7	4	3	2
2-1/2"	45	40	36	30	17	14	12	6	3	3
3"	70	60	50	40	20	20	17	7	6	6
3-1/2"	-	-	-	-	-	-	22	12	7	6
4"	-	-	-	-	-	-	30	14	12	7

COMMUNICATIONS SYMBOL LEGEND

SYMBOL	DESCRIPTION	MOUNTING
▽	TEL./DATA OUTLET; PROVIDE BACK BOX, DUAL RJ45 JACKS, COVER PLATES AND CABLING (CAT. #6, 2-RUNS) AS INDICATED IN DETAILS ON THIS DRAWING. CABLE TO BE RUN FROM BACKBOX UP WALL IN 3/4" CONDUIT TO ABOVE DROP CEILING AND ONTO CABLE TRAY SYSTEM IN COMMON CORRIDOR AND ONTO DATA RACKS. ALL EQUIPMENT COLORS TO TO BE SELECTED BY ARCHITECT.	18" A.F.F.
▼	DATA OUTLET; PROVIDE BACK BOX, RJ45 JACK, COVER PLATES AND CABLING (CAT. #6) AS INDICATED IN DETAILS ON THIS DRAWING. CABLE TO BE RUN FROM BACKBOX UP WALL IN 3/4" CONDUIT TO ABOVE DROP CEILING AND ONTO CABLE TRAY SYSTEM IN COMMON CORRIDOR AND ONTO DATA RACKS. ALL EQUIPMENT COLORS TO TO BE SELECTED BY ARCHITECT.	18" A.F.F.
▽	TELEPHONE OUTLET; PROVIDE BACK BOX, RJ45 JACK, COVER PLATES AND CABLING (CAT. #6) AS INDICATED IN DETAILS ON THIS DRAWING. CABLE TO BE RUN FROM BACKBOX UP WALL IN 3/4" CONDUIT TO ABOVE DROP CEILING AND ONTO CABLE TRAY SYSTEM IN COMMON CORRIDOR AND ONTO DATA RACKS. ALL EQUIPMENT COLORS TO TO BE SELECTED BY ARCHITECT.	18" A.F.F.
WIFI CLG. MTD.	WIFI OUTLET; PROVIDE BACK BOX, RJ45 JACK, COVER PLATES AND CABLING (CAT. #6) AS INDICATED IN DETAILS ON THIS DRAWING. CABLE TO BE RUN FROM BACKBOX ABOVE DROP CEILING TO CABLE TRAY SYSTEM IN COMMON CORRIDOR AND ONTO DATA RACKS. ALL EQUIPMENT COLORS TO TO BE SELECTED BY ARCHITECT.	FLUSH IN CEILING
TV	TELEVISION OUTLET; PROVIDE BACK BOX,COAX JACK, COVER PLATES AND CABLING (COAX CABLE) AS INDICATED IN DETAILS ON THIS DRAWING. CABLE TO BE RUN FROM BACKBOX UP WALL IN 3/4" CONDUIT TO ABOVE DROP CEILING AND ONTO CABLE TRAY SYSTEM IN COMMON CORRIDOR AND ONTO CABLE TELEVISION SERVICE EQUIPMENT. ALL EQUIPMENT COLORS TO TO BE SELECTED BY ARCHITECT.	FLUSH IN WALL, VERFIY HGT. WITH ARCH.
CR	SECURITY SYSTEM CARD ACCESS READER (BY OTHERS). E.C. SHALL PROVIDE RECESSED BACKBOX PER SECURITY SYSTEM VENDOR'S DIRECTION WITH 3/4" CONDUIT WITH PULL STRING FROM CARD ACCESS READER TO ABOVE DROP CEILING WITHIN THE BUILDING. LABEL CONDUIT ABOVE DROP CEILING WITH LOCATION OF CARD ACCESS READER. PROVIDE BUSHED END CAPS TO ALL CONDUITS.	48" AFF OR AFG
PP	DOOR ACTUATPR PUSH-PLATE (BY OTHERS). E.C. SHALL PROVIDE RECESSED BACKBOX PER DOOR VENDOR'S & ARCHITECT'S DIRECTION WITH 3/4" CONDUIT WITH PULL STRING FROM PUSH-PLATE TO ABOVE DROP CEILING WITHIN THE BUILDING AND/OR DOOR OPERATOR. LABEL CONDUIT ABOVE DROP CEILING WITH LOCATION OF PUSH-PLATE. PROVIDE BUSHED END CAPS TO ALL CONDUITS.	48" AFF OR AFG
	PENDANT HUNG CABLE TRAY SYSTEM AS MANUFACTURED BY "CABLOFIL" (OR) APPROVED EQUAL. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS TO INSTALL A COMPLETE WIRE MANAGEMENT SYSTEM. CABLE TRAY SYSTEM TO BE A MINIMUM OF 12" WIDE BY 2" TALL, CONSTRUCTED OF STEEL / MESH TYPE.	VERIFY
	PLENUM RATED, CAT #6 WIRING. MFG. TELEDATA EXPRESS, CATALOG #101360 (OR) APPROVED EQUAL.	

TYPICAL ELECTRICAL NOTES

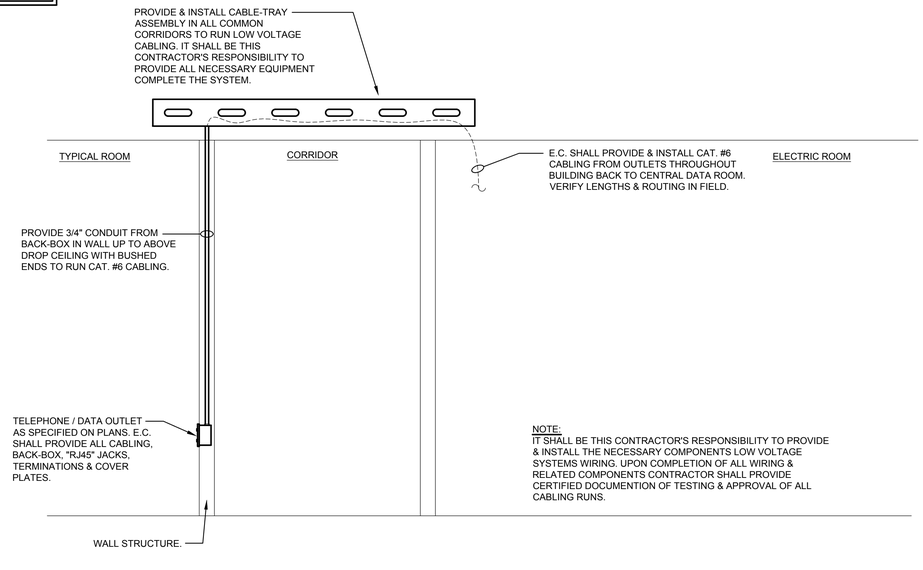
1. FURNISH LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR THE PROPER AND COMPLETE INSTALLATION OF ALL ELECTRIC WORK SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED.
2. ALL ITEMS NOT SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE ELECTRICAL INSTALLATION, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS PROJECT.
3. ALL ELECTRICAL INSTALLATIONS AND GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE LOCAL, STATE AND NATIONAL CODES.
4. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
5. MATERIALS AND WORKMANSHIP SHALL BE THE BEST OF THEIR RESPECTIVE KIND AND IN FULL ACCORDANCE WITH THE MOST MODERN ELECTRICAL CONSTRUCTION STANDARDS. ALL MATERIAL SHALL BE NEW, UNLESS OTHERWISE NOTED AND FREE OF ANY DEFECTS.
6. THE ELECTRICAL CONTRACTOR SHALL CLEAN AT THE END OF EACH DAY ALL AREAS WORKED IN. EMPTY BOXES, RUBBISH, AND OTHER CONSTRUCTION MATERIALS OF NO USE SHALL BE REMOVED FROM THE BUILDING.
7. ALL WORK SEQUENCES SHALL BE COORDINATED WITH THE G.C. AND SHALL BE COORDINATION WITH OTHER BUILDING TRADES AND G.C. BUILDING SCHEDULES.
8. ALL BRANCH CIRCUITS RATED AT 120 VOLTS, 20 AMPERES EXCEEDING 75 FEET SHALL BE MINIMUM #10 AWG.
9. THE ELECTRICAL CONTRACTOR (E.C.) SHALL COORDINATE WITH THE LOCAL UTILITY POWER COMPANY AND PROVIDE ALL MATERIAL & LABOR REQUIRED TO COMPLY WITH THE UTILITY POWER COMPANY'S REQUIREMENTS AND STANDARDS, PRIOR TO ORDERING ANY ELECTRICAL EQUIPMENT, SUCH AS, SWITCHGEAR, PANELS, TRANSFORMERS, DISCONNECT SWITCHES, ETC... E.C. SHALL CONFIRM METERING SEQUENCE (HOT OR COLD) AND MAKE THE APPROPRIATE PROVISIONS FOR THE APPROVED METERING SEQUENCE ARRANGEMENT. A.I.C. RATINGS, GROUNDING, BONDING, RACEWAYS, ETC... SHALL BE IN ACCORDANCE WITH THE UTILITY COMPANY'S STANDARDS.
10. THE ELECTRICAL CONTRACTOR (E.C.) SHALL COORDINATE WITH THE LOCAL TELEPHONE COMPANY AND PROVIDE ALL MATERIAL & LABOR REQUIRED TO COMPLY WITH THE TELEPHONE COMPANY'S REQUIREMENTS AND STANDARDS, PRIOR TO ODERING ANY ELECTRICAL EQUIPMENT, SUCH AS, TERMINAL BOARDS, GROUNDING, RACEWAYS, ETC...
11. ALL RECEPTACLE WITH "WP" DESIGNATION SHALL BE PROVIDED WITH A WEATHER-PROOF WHILE IN-USE ENCLOSURE. (TYPICAL)
12. ELECTRICAL CONTRACTOR TO ALLOW TIME FOR DIRECTIONAL ADJUSTMENT OF ALL LIGHT FIXTURES AS DIRECTED BY OWNER.
13. ALL RECEPTACLES SHALL BE LABELED INDICATING THEIR RESPECTIVE PANEL & CIRCUIT NUMBER.
14. ALL PENETRATIONS FOR POWER RECEPTACLES, JUNCTION BOXES, TELEPHONE/DATA OUTLETS, SWITCHES, BACKBOXES, ETC.. LOCATED IN EXTERIOR WALLS SHALL BE PROVIDED WITH APPROPRIATE CAULKING AND GASKETS TO SEAL OFF AND PREVENT AIR LEAKAGE. FOLLOW CAULKING AND GASKET MANUFACTURERS INSTALLATION GUIDELINES TO ENSURE CORRECT AND EFFECTIVE INSTALLATION.



HORIZONTAL MOUNT

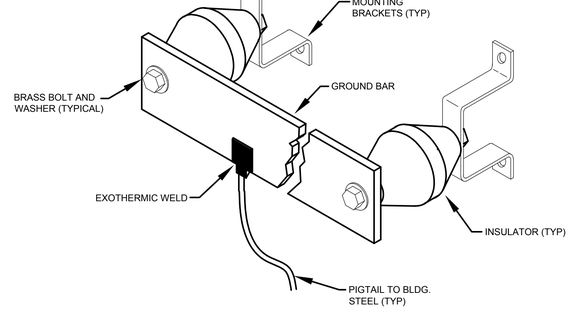
WEATHER-PROOF RECEPTACLE DETAIL

NOT TO SCALE



TYPICAL WIRING DIAGRAM FOR COMMUNICATIONS DISTRIBUTION

NOT TO SCALE



NOTES:

1. PROVIDE GROUND BAR (1/4" X 4" X 12") WITH WALL MOUNTING BRACKETS, INSULATORS AND A 25' EXOTHERMICALLY WELDED PIGTAIL (#6 AWG) IN EACH LAN ROOM & COMMUNICATIONS ROOM.
2. MOUNT GROUND BAR AT THE BOTTOM RIGHT CORNER ON THE PLYWOOD BACKBOARD.
3. GROUND BARS SHALL HAVE CAPACITY FOR NINE (9) GROUNDING LUGS TO BE ATTACHED.
4. CONNECT EXOTHERMICALLY WELDED PIGTAIL TO BUILDING STEEL.
5. GROUND BARS SHALL BE ELECTROLYTIC COPPER AND SHALL BE MOUNTED ON INSULATORS RATED AT 2700 VOLTS.
6. COPPER SURFACES SHALL BE SMOOTH AND WITHOUT MARKS DEEPER THAN 0.010 INCHES.
7. MANUFACTURERS SHALL BE ERICO, HARGER OR APPROVED EQUAL.

TYPICAL GROUND BAR DETAIL

NOT TO SCALE

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Scarborough, ME 04074
Tel (401) 510-1928 Fax (401) 510-2904

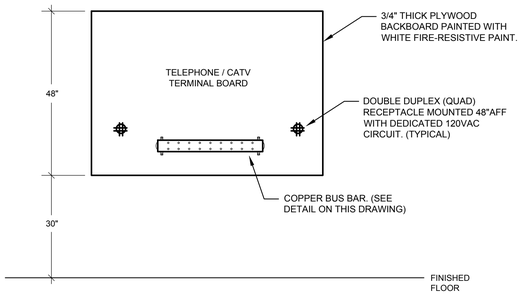
SHEET CONTENTS:

ELECTRICAL LEGENDS & NOTES

PROJECT # 4222

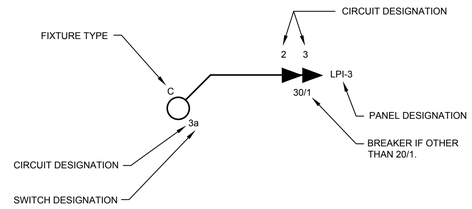
DATE: 08/07/2023
REVISED DATE:

E0.2



TELEPHONE TERMINAL BOARD DETAIL

NOT TO SCALE



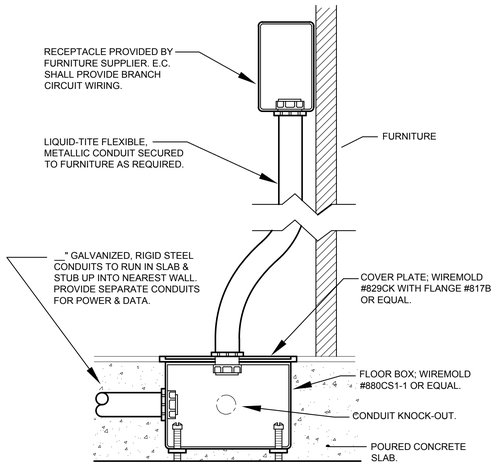
NOTES:

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN CONTRACT. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS BUT NOT ON PLANS, AND VICE VERSA, SHALL APPLY OR SHALL BE PROVIDED AS THOUGH EXPRESSLY REQUIRED ON BOTH. IT IS NOT INTENDED THAT EVERY JUNCTION BOX, OFFSET, FITTING OR COMPONENT BE SPECIFIED OR SHOWN ON DRAWINGS; HOWEVER, CONTRACT DOCUMENTS REQUIRE PROVISION OF ALL COMPONENTS AND MATERIALS NECESSARY FOR COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, WHETHER OR NOT INDICATED OR SPECIFIED.

2. BRANCH CIRCUIT WIRING MAY NOT BE GRAPHICALLY SHOWN ON DRAWINGS AND MAY BE SHOWN BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT. PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT SHOWN GRAPHICALLY. WIRING IS SHOWN BY CONDUIT RUNS ON DRAWINGS WHERE SPECIFIC ROUTING IS REQUIRED OR FOR OTHER SPECIAL REASONS. ONLY ROOMS WITH MULTIPLE SWITCHING HAVE "SWITCH CONTROL LETTERS" ASSIGNED. PROVIDE THHN CONDUCTORS IN AREAS WITH HIGH AMBIENT TEMPERATURES SUCH AS BOILER ROOMS, INCINERATOR ROOMS, MECHANICAL EQUIPMENT ROOMS ETC., FOR SIZES LARGER THAN NO. 10 AWG.

TYPICAL CIRCUITING DETAIL

NOT TO SCALE



NOTE:

1. FINISHED FLOOR BY OTHERS. FLOOR BOX FLANGE SHALL BE INSTALLED SO THAT FLANGE AND TILE IS FLUSH AND BUTTED UP AGAINST ONE ANOTHER. E.C. TO COORDINATE WITH FLOOR INSTALLER PRIOR TO FLOOR INSTALLATION AND FLANGE INSTALLATION.

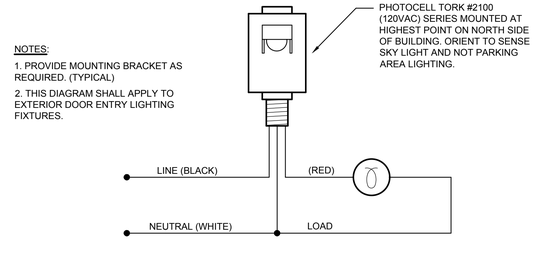
2. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS.

3. COORDINATE FINAL LOCATION OF FLOOR BOX IN FIELD WITH FURNITURE VENDOR.

SYMBOL ON PLANS:

FURNITURE OUTLET CONNECTION DETAIL

NOT TO SCALE



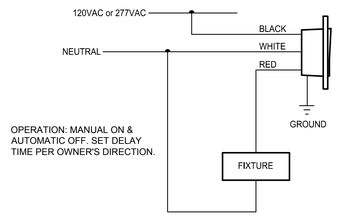
NOTES:

1. PROVIDE MOUNTING BRACKET AS REQUIRED. (TYPICAL)

2. THIS DIAGRAM SHALL APPLY TO EXTERIOR DOOR ENTRY LIGHTING FIXTURES.

SITE LIGHTING CONTROL DIAGRAM PHOTOCELL ONLY

NOT TO SCALE



SYMBOL = WS

TYPICAL WIRING DIAGRAM FOR "WS" SENSOR

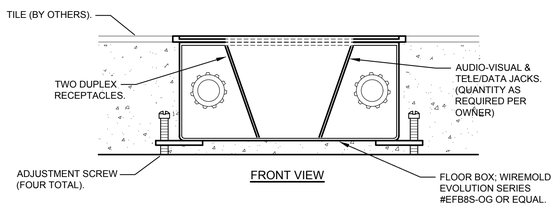
NOT TO SCALE

NOTE:

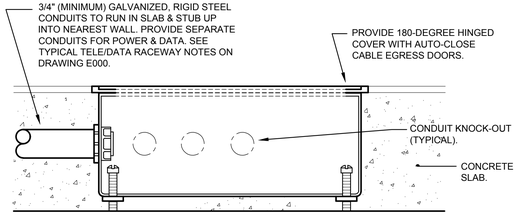
1. TILE FLOOR BY OTHERS. FLOOR BOX FLANGE SHALL BE INSTALLED SO THAT FLANGE AND TILE IS FLUSH AND BUTTED UP AGAINST ONE ANOTHER. E.C. TO COORDINATE WITH FLOOR INSTALLER PRIOR TO FLOOR INSTALLATION AND FLANGE INSTALLATION.

2. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS.

3. PROVIDE ALL REQUIRED BRACKETS, FITTINGS, OUTLETS, JACKS, GROUNDING, ACCESSORIES FOR A COMPLETE OPERATIONAL INSTALLATION.



FRONT VIEW

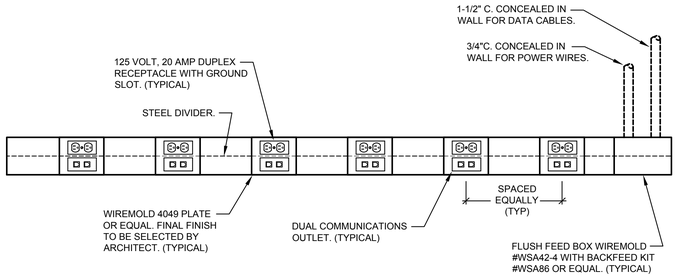


SIDE VIEW

SYMBOL ON PLANS = FB

OUTLET FLOOR BOX DETAIL

NOT TO SCALE



NOTES:

1. PROVIDE (1) DUPLEX POWER RECEPTACLE & (1) DUPLEX DATA OUTLET AS SHOWN ON PLANS.

2. COORDINATE WITH ARCHITECT FOR EXACT HEIGHT OF WIREMOLD PRIOR TO INSTALLING ANY MATERIAL.

3. DERATE CONDUCTORS AS REQUIRED PER CODE. (TYPICAL)

4. PROVIDE PULL STRINGS AND BUSHED ENDS FOR ALL CONDUITS (TYP.).

5. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL MULTI-OUTLET SURFACE RACEWAY, ACCESSORIES AND FITTINGS NEEDED FOR A COMPLETE INSTALLATION WITH ANTHONY AIMOLA OF WIREMOLD PRIOR TO BID. DETAILS SHOWN ON ALL DRAWINGS ARE SUBJECT TO REVIEW AND COORDINATION WITH WIREMOLD.

CONTACT INFORMATION FOR WIREMOLD IS AS FOLLOWS:
WIREMOLD/LEGRAND - MICHAEL T. COLE
10 RODMAN STREET
QUINCY, MA 02169
TEL. 860-906-8288
EMAIL: michael.cole@legrand.us

SURFACE RACEWAY WITH OUTLETS DETAIL

NOT TO SCALE

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

CDS ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerville, RI 02814
Tel (401) 710-1001 Fax (401) 710-0764

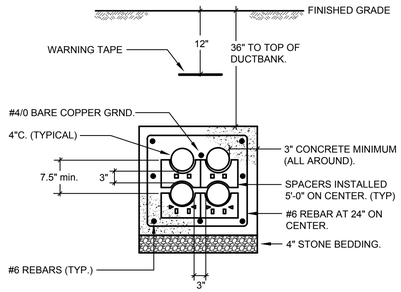
SHEET CONTENTS:

ELECTRICAL LEGENDS & NOTES

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E0.3

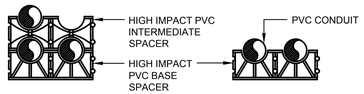


TYPICAL DUCT BANK CONSTRUCTION DETAIL

NOT TO SCALE

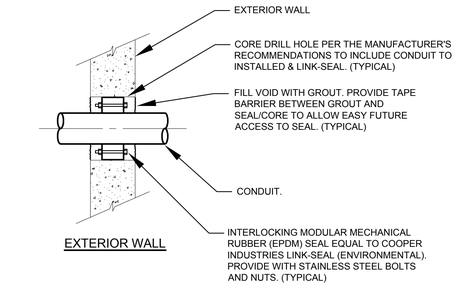
NOTES:

1) ALL BASE AND INTERMEDIATE SPACERS TO BE INTERLOCKING TYPE.
2) ALL SPACERS TO MAINTAIN 3" SPACE WITH 4" DUCTS.
3) ALL SPACERS TO BE CONSTRUCTED OF HIGH IMPACT PVC.
4) ALL SPACERS TO BE INSTALLED AT 5'-0" CENTERS ALONG ENTIRE RUN.



TYPICAL SPACER DETAILS

NOT TO SCALE



WATER TIGHT CONDUIT SEAL DETAIL

NOT TO SCALE

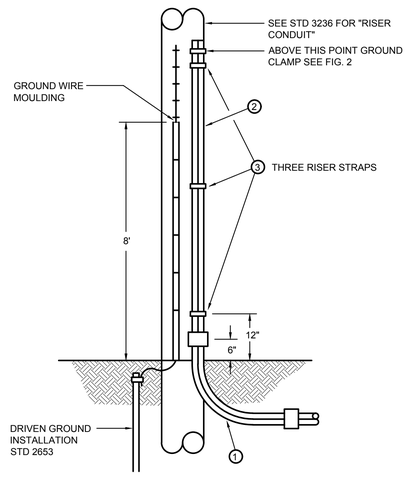


FIGURE 1

NOT TO SCALE

NOTES:

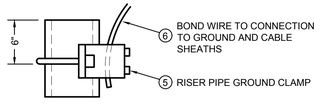
1. RISER PIPES SHALL BE LOCATED ON THE STREET QUARTER OF THE POLE, AND, WHEN POSSIBLE ON THE QUARTER AWAY FROM APPROACHING TRAFFIC.
2. RISER PIPES SHOULD NOT BE PLACED ON SAME POLE WITH COMMUNICATIONS RISER IF AVOIDABLE.
3. FOR A CUSTOMER-OWNED RISER, 600 VOLTS AND BELOW, RIGID NONMETALLIC CONDUIT, IN ACCORDANCE WITH ARTICLE 300-5 OF THE NATIONAL ELECTRIC CODE, IS ACCEPTABLE.

RISER PIPE INSTALLATION DETAIL

NOT TO SCALE

CODE NUMBERS FOR PIPE SIZES OF:			
ITEM	2"	3"	4"
1	CONDUIT BEND, GALVANIZED (STD 3253) 690424 (2' R)	690436 (3' R)	690446 (3' R)
2	CONDUIT - 10' LENGTH - GALVANIZED STEEL 692105	692107	692109
3	RISER STRAPS - STD 3255 641200	641205	641210
4	LAG SCREWS 3/8" x 3"		
5	RISER PIPE CONNECTOR 961270	961275	961285
6	#6 COPPER SOLID BARE (24" LONG) 943061		

* REFER TO STD 3240 FOR 5" & 6" RISER INSTALLATIONS.

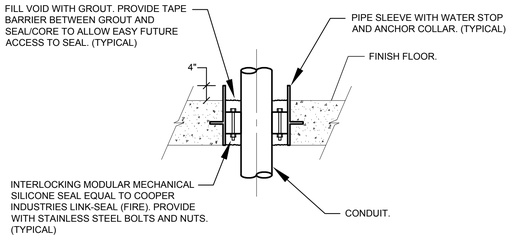


NOTE:

INSTALL GROUND CLAMP AS SHOWN. CONNECT TO POLE EQUIPMENT GROUNDING CONDUCTOR WHEN AVAILABLE. OTHERWISE, INSTALL GROUND ROD AND RUN MIN. #6 SOLID COPPER UP POLE AND CONNECT TO COMMON NEUTRAL. INSTALL 8 FEET OF MOULDING OVER GROUND WIRE AND CONNECT RISER GROUND CLAMP TO GROUND WIRE ABOVE MOULDING AS SHOWN.

FIGURE 2

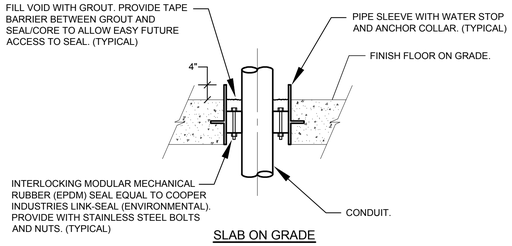
NOT TO SCALE



BETWEEN FLOORS

WATER TIGHT / FIRE RESISTANT CONDUIT SEAL DETAIL

NOT TO SCALE



SLAB ON GRADE

WATER TIGHT CONDUIT SEAL DETAIL

NOT TO SCALE

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
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Woonsocket, RI 02845

CDS ENGINEERING DESIGN SERVICES INCORPORATED
14 Industrial Highway Somerville, RI 02879
Tel (401) 763-1629 Fax (401) 762-0764

SHEET CONTENTS:

ELECTRICAL LEGENDS & NOTES

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E0.4

FIRE ALARM SYMBOL LEGEND

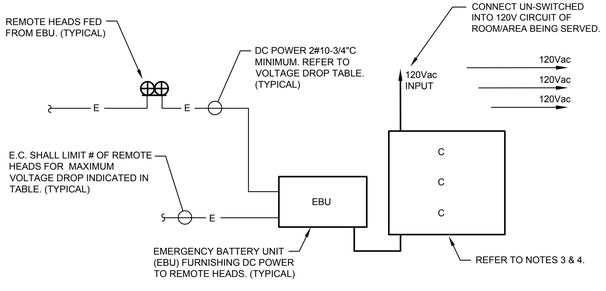
SYMBOL	DESCRIPTION	MOUNTING
SD	FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR.	CEILING
H	FIRE ALARM SYSTEM COMBINATION RATE OF RISE AND 135-DEGREES FAHRENHEIT FIXED TEMPERATURE HEAT DETECTOR. "AC" DESIGNATION INDICATES TO INSTALL HEAT DETECTOR "ABOVE CEILING".	CEILING
H 197	FIRE ALARM SYSTEM 197-DEGREES FAHRENHEIT FIXED TEMPERATURE HEAT DETECTOR.	CEILING
SD	FIRE ALARM SYSTEM DUCT SMOKE DETECTOR; INSTALLED BY HVAC CONTRACTOR & FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR.	CEILING
FS	FIRE SPRINKLER SYSTEM FLOW SWITCH; FURNISHED & INSTALLED BY F.P. CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR INTO THE FIRE ALARM SYSTEM VIA AN INDIVIDUAL ADDRESSABLE MONITOR MODULE.	VALVE
TS	FIRE SPRINKLER SYSTEM TAMPER SWITCH; FURNISHED & INSTALLED BY F.P. CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR INTO THE FIRE ALARM SYSTEM VIA AN INDIVIDUAL ADDRESSABLE MONITOR MODULE.	VALVE
R	FIRE ALARM SHUT DOWN RELAY.	
F	FIRE ALARM SYSTEM MANUAL DOUBLE ACTION PULL STATION.	48" AFF TO TOP OF HANDLE.
F 75cd	FIRE ALARM SYSTEM STROBE. ALL STROBES SHALL BE SYNCHRONIZED AND COMPLY WITH ADA.	80" AFF
75cd LF F WP	FIRE ALARM SYSTEM AUDIBLE/STROBE. ALL AUDIBLE/STROBES SHALL BE SYNCHRONIZED AND COMPLY WITH ADA. "WP" INDICATES TO PROVIDE WEATHER-PROOF DEVICE. "LF" INDICATES HORN SHALL BE 520Hz LOW-FREQUENCY TYPE DEVICE. "75cd" INDICATES CANDELA RATING OF STROBE.	80" AFF
75cd LF F WP	FIRE ALARM SYSTEM CEILING TYPE AUDIBLE/STROBE. ALL AUDIBLE/STROBES SHALL BE SYNCHRONIZED AND COMPLY WITH ADA. "WP" INDICATES TO PROVIDE WEATHER-PROOF DEVICE. "LF" INDICATES HORN SHALL BE 520Hz LOW-FREQUENCY TYPE DEVICE.	CEILING
LF F	FIRE ALARM SYSTEM AUDIBLE ONLY. ALL AUDIBLE DEVICES SHALL BE SYNCHRONIZED AND COMPLY WITH ADA. "LF" INDICATES HORN SHALL BE 520Hz LOW-FREQUENCY TYPE DEVICE.	80" AFF
CM	FIRE ALARM SYSTEM CONTROL MODULE.	
MM	FIRE ALARM SYSTEM MONITOR MODULE.	
RTS	FIRE ALARM SYSTEM DEVICE REMOTE TEST STATION WITH LED INDICATING LIGHT.	
RIL	FIRE ALARM SYSTEM DEVICE WITH LED INDICATING LIGHT TO DISPLAY ALARM CONDITION OF REMOTE DETECTOR. CENTER ABOVE DOOR.	
M	FIRE ALARM DIALER. COORDINATE EXACT TIE IN WITH MANUFACTURER. LOCATE PER LOCAL AHJ.	
K	WEATHER-PROOF KNOX-BOX. LOCATE PER LOCAL AHJ.	
BDA	BI-DIRECTIONAL APPLICATION. LOCATE PER LOCAL AHJ.	
B WP	FIRE ALARM SYSTEM BEACON. "WP" INDICATES TO PROVIDE WEATHER-PROOF DEVICE.	
F/SD	FIRE / SMOKE DAMPER PROVIDED BY THE MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN INDIVIDUAL FIRE ALARM SYSTEM CONTROL RELAY MODULE AND TIE-IN DAMPER INTO THE FIRE ALARM SYSTEM. PROVIDE 120VAC POWER SUPPLY CIRCUIT AS REQUIRED.	
FACP	ADDRESSABLE FIRE ALARM CONTROL UNIT (PANEL).	
NAC	FIRE ALARM SYSTEM NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL (BOOSTER).	

FIRE ALARM NOTES

1. E.C. SHALL PROVIDE CIRCUIT BREAKER LOCK-ON DEVICES FOR FACP AND NAC CIRCUIT.
2. E.C. SHALL FURNISH AND INSTALL REMOTE INDICATING LIGHTS/TEST SWITCHES FOR DUCT SMOKE DETECTORS.
3. REFER TO FLOOR PLANS FOR EXACT NUMBER OF DEVICES AND CANDELA RATINGS.
4. COLOR CODE WIRING PER THE LATEST EDITION OF THE STATE FIRE CODE.
5. SPLICES WILL NOT BE ALLOWED. WIRENUTS WILL NOT BE ALLOWED.
6. RED PAINTED TERMINAL CABINETS & BOXES WITH LOCKABLE COVERS SHALL BE PROVIDED AT ALL JUNCTION POINTS.
7. AFC FIRE ALARM / CONTROL CABLE TYPE MC (UL LISTED) MAY BE USED ABOVE CEILINGS AND IN CONCEALED AREAS WHERE ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION. EXPOSED AREAS SHALL BE EMT, PAINTED PER ARCHITECTS DIRECTION. ALL CONDUCTORS SHALL BE A MINIMUM OF #16AWG SOLID COPPER, TYPE THHN, THWN OR TFN. ALL WIRING SHALL RUN CONTINUOUSLY FROM DEVICE TO DEVICE.
8. THE CONTRACTOR AT COMPLETETION OF THE FIRE ALARM SYSTEM SHALL TEST THE ENTIRE SYSTEM PER THE LOCAL FIRE DEPARTMENTS REQUIREMENTS. THE CONTRACTOR SHALL REPLACE OR FIX ANY PART OF THE SYSTEM NOT PROPERLY WORKING.
9. THE MINIMUM SEPARATION BETWEEN THE OUTGOING AND RETURN FIRE ALARM CIRCUITS SHALL BE A MINIMUM OF 1-FOOT VERTICALLY AND 4-FEET HORIZONTALLY IN ACCORDANCE WITH THE PROVISIONS OF NFPA-72.
10. ALL FIRE ALARM SYSTEM COMPONENTS & MOUNTING HEIGHTS SHALL COMPLY WITH ADA REQUIREMENTS.
11. E.C. SHALL PROVIDE ANY AND ALL AUXILARY EQUIPMENT IN ORDER TO PROVIDE A COMPLETE, PROPERLY FUNCTIONING SYSTEM. COORDINATE REQUIREMENTS WITH LOCAL MANUFACTURERS REP.
12. ALL FIRE ALARM STROBE SIGNAL DEVICES SHALL BE SYNCHRONIZED TYPE DEVICES AND COMPLY WITH ADA REQUIREMENTS.
13. NO T-TAPPING OF FIRE ALARM WIRING SHALL BE ALLOWED. (TYPICAL)
14. ALL FIRE ALARM WIRING & RACEWAY SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT BE LOCATED AS TO BE DAMAGED BY BUILDING USE.
15. PROVIDE A WEATHER-PROOF KNOX-BOX 3200 SERIES ON THE EXTERIOR OF THE BUILDING. COORDINATE EXACT LOCATION WITH LOCAL FIRE DEPARTMENT.
16. ALL SMOKE DETECTORS SHALL BE MOUNTED ON THE CEILING AND UL LISTED FOR CEILING MOUNTING AND LOCATED NOT LESS THAN 12-INCHES FROM ANY WALL. DETECTORS SHALL NOT BE IN A DIRECT AIR FLOW NOR CLOSER THAN 3-FEET FROM ANY AIR SUPPLY DIFFUSER. (TYPICAL)
17. UL LISTED INSULATED THROAT, SET SCREW CONNECTORS SHALL BE USED WITH MC CABLE INSTALLATIONS, (CLAMP CONNECTORS ARE NOT ALLOWED). A CABLE CUTTING TOOL WITH CONTROLLED DEPTH OF CUT SHALL BE USED IN ALL MC CABLE INSTALLATIONS.
18. FAULT ISOLATION MODULES SHALL BE INSTALLED FOR EVERY 25 DEVICES AND IN NO CASE SHALL THE LENGTH OF AN AREA BE DISABLED BY A WIRE-TO-WIRE SHORT CIRCUIT FAULT EXCEED 200' IN ANY ONE DIRECTION. WHERE A SINGLE CIRCUIT SERVES MORE THAN ONE FLOOR; FAULT ISOLATION MODULES SHALL BE INSTALLED TO PREVENT A WIRE-TO-WIRE SHORT CIRCUIT FAULT ON ONE FLOOR TO DISABLE THE CIRCUIT ON ANOTHER FLOOR.
19. WIRING FOR THE FIRE ALARM SYSTEM SHALL BE CLASS "A".
20. REFER TO THE SPECIFICATIONS FOR THE "SEQUENCE OF OPERATION" AND ADDITIONAL INFORMATION.
21. E.C. SHALL PRODUCE A MANUFACTURER'S COMPLETE FIRE ALARM SYSTEM ONE-LINE DIAGRAM AND ADDRESS PLAN DURING THE SHOP DRAWING SUBMITTAL PROCESS.
22. E.C. SHALL PROVIDE ALARM INDICATORS AND HVAC EQUIPMENT OVERRIDE SWITCHES MOUNTED IN UTILITY ROOMS WITH FIRE ALARM PANEL. ALL SWITCHES AND HEATING UNITS SHALL BE CLEARLY LABELED BY NUMBERS AS PER PLANS.
23. E.C. SHALL OBTAIN FROM THE LOCAL FIRE DEPARTMENT, A LIST OF FIRE ALARM ZONE CODES AND DESCRIPTIONS AND PROGRAM INTO FIRE ALARM SYSTEM AS REQUIRED.

EMERGENCY LIGHTING SYMBOL LEGEND

SYMBOL	DESCRIPTION	MOUNTING
#1 WP	DUAL EMERGENCY LIGHTING FIXTURE (REMOTE HEAD) WIRED TO EMERGENCY BATTERY UNIT (EBU) WITH REMOTE CAPABILITY. COOPER LIGHTING #APEL. LAMPS SHALL BE 8-WATTS / 12-VOLTS FOR EACH LAMP. #1 INDICATES WIRE TO EBU WITH SAME DESIGNATION.	WALL
EBU #1	EMERGENCY BATTERY UNIT (NO ATTACHED HEADS) WITH REMOTE CAPABILITIES. EQUAL TO LITHONIA #ELT275-W-RO-AM-VM. CONNECT UN-SWITCHED TO LOCAL 120-VOLT LIGHTING CIRCUIT. "#1" INDICATES EBU DESIGNATION.	WALL
#1 CLG	DUAL EMERGENCY LIGHTING FIXTURE (REMOTE HEAD) WIRED TO EMERGENCY BATTERY UNIT (EBU) WITH REMOTE CAPABILITY. COOPER LIGHTING #APEL. LAMPS SHALL BE 5.5-WATTS / 12-VOLTS FOR EACH LAMP. #1 INDICATES WIRE TO EBU WITH SAME DESIGNATION. "CLG" INDICATES CEILING MOUNTED.	WALL, UON
	SINGLE FACE LED LIGHTED EXIT SIGN WITH EMERGENCY BATTERY BACK-UP. SHADED QUADRANT DENOTES LIGHTED FACE(S). EQUAL TO MULE LIGHTING #EUS79-R (HOUSING COLOR TO BE DETERMINED BY ARCHITECT). PROVIDE DIRECTIONAL ARROWS WHERE INDICATED ON PLANS. CONNECT UN-SWITCHED TO A 120 OR 277VOLT LOCAL LIGHTING CIRCUIT.	CEILING
	DUAL FACE LED LIGHTED EXIT SIGN WITH EMERGENCY BATTERY BACK-UP. SHADED QUADRANT DENOTES LIGHTED FACE(S). EQUAL TO MULE LIGHTING #EUS79-R (HOUSING COLOR TO BE DETERMINED BY ARCHITECT). PROVIDE DIRECTIONAL ARROWS WHERE INDICATED ON PLANS. CONNECT UN-SWITCHED TO A 120 OR 277VOLT LOCAL LIGHTING CIRCUIT.	CEILING

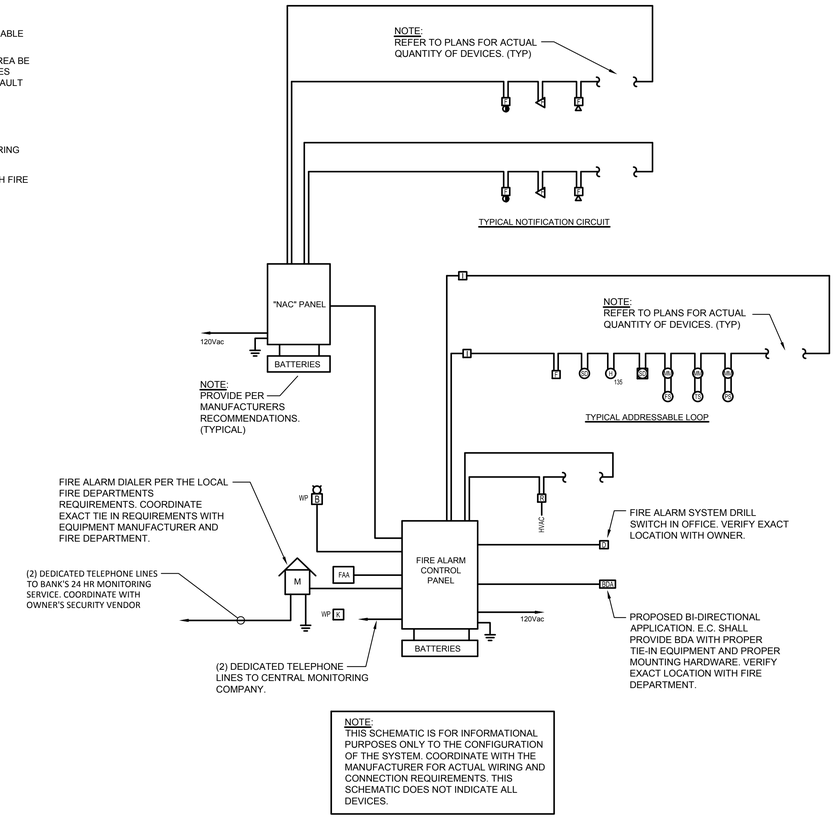


TYPICAL EMERGENCY LIGHTING CONNECTION DETAIL

NOT TO SCALE

NOTES:

1. E.C. SHALL PROVIDE CIRCUIT BREAKER "LOCK-ON" DEVICE FOR ALL CIRCUITS TO EMERGENCY BATTERY UNITS (EBU). (TYPICAL)
2. DETAIL IS TYPICAL TO ALL DRAWINGS, UON.
3. RELAY PANEL WITH (3) 20A, N.O. 120V COIL RELAYS MOUNTED IN 8"x8"x4" NEMA-1 STEEL ENCLOSURE WITH HINGED COVER. RELAYS HELD CLOSED BY MONITORED LIGHTING CIRCUITS. FIELD VERIFY EXACT NUMBER OF RELAYS REQUIRED PRIOR TO WORK. MONITORED LIGHTING CIRCUITS SHALL BE CONNECTED AHEAD OF ANY SWITCHES.



NOTE:
THIS SCHEMATIC IS FOR INFORMATIONAL PURPOSES ONLY TO THE CONFIGURATION OF THE SYSTEM. COORDINATE WITH THE MANUFACTURER FOR ACTUAL WIRING AND CONNECTION REQUIREMENTS. THIS SCHEMATIC DOES NOT INDICATE ALL DEVICES.

TYPICAL FIRE ALARM SCHEMATIC

NOT TO SCALE

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
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Woonsocket, RI 02895

CDS ENGINEERING DESIGN SERVICES INCORPORATED
141 Mineral Highway Somerville, RI 02814
Tel (401) 769-1001 Fax (401) 769-0954

SHEET CONTENTS:

ELECTRICAL LIFE SAFETY LEGENDS & NOTES

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E0.5

SHEET NOTES:

1. PROVIDE 120 VOLT, 20 AMP CIRCUIT WITH WIRING CONSISTING OF 2#12 + 1#12 GND. IN 3/4" CONDUIT AND 30AF/3P/3R DISCONNECT SWITCH, FOR OVERHEAD DOOR POWER. PROVIDE CONDUIT FROM OPERATOR TO PUSH BUTTON FOR CONTROL WIRES AS REQUIRED. VERIFY EXACT POWER REQUIREMENTS & CONNECTIONS WITH DOOR SUPPLIER PRIOR TO ANY WORK.
2. PROVIDE 120 VOLT, 20 AMP CIRCUIT WITH WIRING CONSISTING OF 2#12 + 1#12 GND. IN 3/4" CONDUIT, FOR REFRIGERANT LEAK DETECTOR POWER. VERIFY EXACT POWER REQUIREMENTS & WIRING WITH MANUFACTURER'S REPRESENTATIVE PRIOR TO ANY WORK. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION.

XXX ##

MECHANICAL EQUIPMENT CONNECTION TAG:

REFER TO "MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE" FOR ALL CIRCUITING INFORMATION, INCLUDING BUT NOT LIMITED TO BRANCH CIRCUITING WIRING AND CONDUIT SIZE, VOLTAGE, PHASE, MOTOR CONTROL, DISC. SWITCH & CIRCUIT BREAKER.

PROVIDE A GFCI RECEPT., TOGGLE SWITCH & LIGHT FIXTURE MTD. ON HVAC UNIT. REFER TO TYPICAL MOUNTING INSTALLATION-HVAC UNITS ON DETAILS SHEET FOR ADDL. INFORMATION. (TYPICAL).

GARAGE 73'-8" x 50'-6" 3,142 SF

OFFICE 10 11'-0" x 11'-0" 121 SF

OFFICE 9 11'-0" x 11'-0" 121 SF

OFFICE 8 11'-1" x 13'-0" 144 SF

OFFICE 7 11'-1" x 11'-6" 127 SF

OFFICE 6 11'-1" x 11'-6" 127 SF

OFFICE 5 11'-1" x 11'-6" 127 SF

OFFICE 4 11'-1" x 11'-6" 127 SF

OFFICE 3 11'-1" x 13'-0" 144 SF

JANITOR 5'-0" x 8'-2" 41 SF

IT/ PRINTING 5'-7" x 8'-2" 47 SF

WOMEN LOCKER ROOM 11'-2" x 6'-10" 174 SF

MEN LOCKER ROOM 15'-6" x 13'-2" 174 SF

BREAK 1 12'-0" x 18'-6" 222 SF

BREAK 2 12'-0" x 18'-6" 222 SF

CONF. 11'-4" x 16'-6" 182 SF

METER TESTING 6'-8" x 11'-0" 73 SF

SCADA 6'-8" x 11'-0" 73 SF

OFFICE 1 11'-0" x 11'-0" 121 SF

OFFICE 2 11'-0" x 11'-0" 121 SF

ENTRY

BOTTLE FILLING STATION

POWER FOR FAN SPEED CONTROL SWITCHS AND CONTROL PANEL

NEW PANEL "LP1" D-TUB

PROPOSED LOCATION FOR NEW METER AND MTS. COORDINATE EXACT LOCATION WITH UTILITY AND OWNER/ ARCHITECT. SEE RISER FOR DETAILS

NEW 208Y/120V 400A 3 PHASE SERVICE SEE RISER FOR DETAILS

1 / E1.0 ELECTRICAL - POWER & SIGNAL FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Scarborough, ME 04074
Tel (401) 510-1928 Fax (401) 510-2904

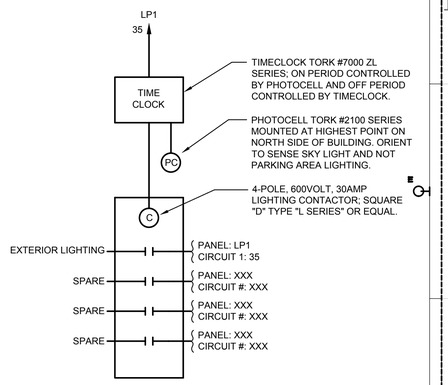
SHEET CONTENTS:

ELECTRICAL POWER & SIGNAL FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E1.0



EXTERIOR LIGHTING CONTROL DIAGRAM

NOT TO SCALE

ALL EXTERIOR LIGHTING UNLESS OTHERWISE SPECIFIED SHALL BE CONTROLLED VIA PHOTOCELL "ON", TIMECLOCK "OFF". (TYPICAL) REFER TO DETAIL ON THIS DRAWING

ALL LIGHTING IN THIS AREA TO BE TIED TO PANEL "LP1", CIRCUIT 36. CIRCUIT SHALL BE RATED FOR 120V, 20A, 1P.

ALL LIGHTING IN THIS AREA TO BE TIED TO PANEL "LP1", CIRCUIT 37. CIRCUIT SHALL BE RATED FOR 120V, 20A, 1P.

ALL FIXTURE TYPES WITH SUBSCRIPT "NL", SHALL BE CONSIDERED "NITE-LITES" AND BE UNSWITCHED. (TYPICAL).

1 / E1.1 ELECTRICAL - LIGHTING FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

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CDS ENGINEERING DESIGN SERVICES INCORPORATED
141 Mineral Highway Dunnville, RI 02874
Tel (401) 539-1001 Fax (401) 539-0964

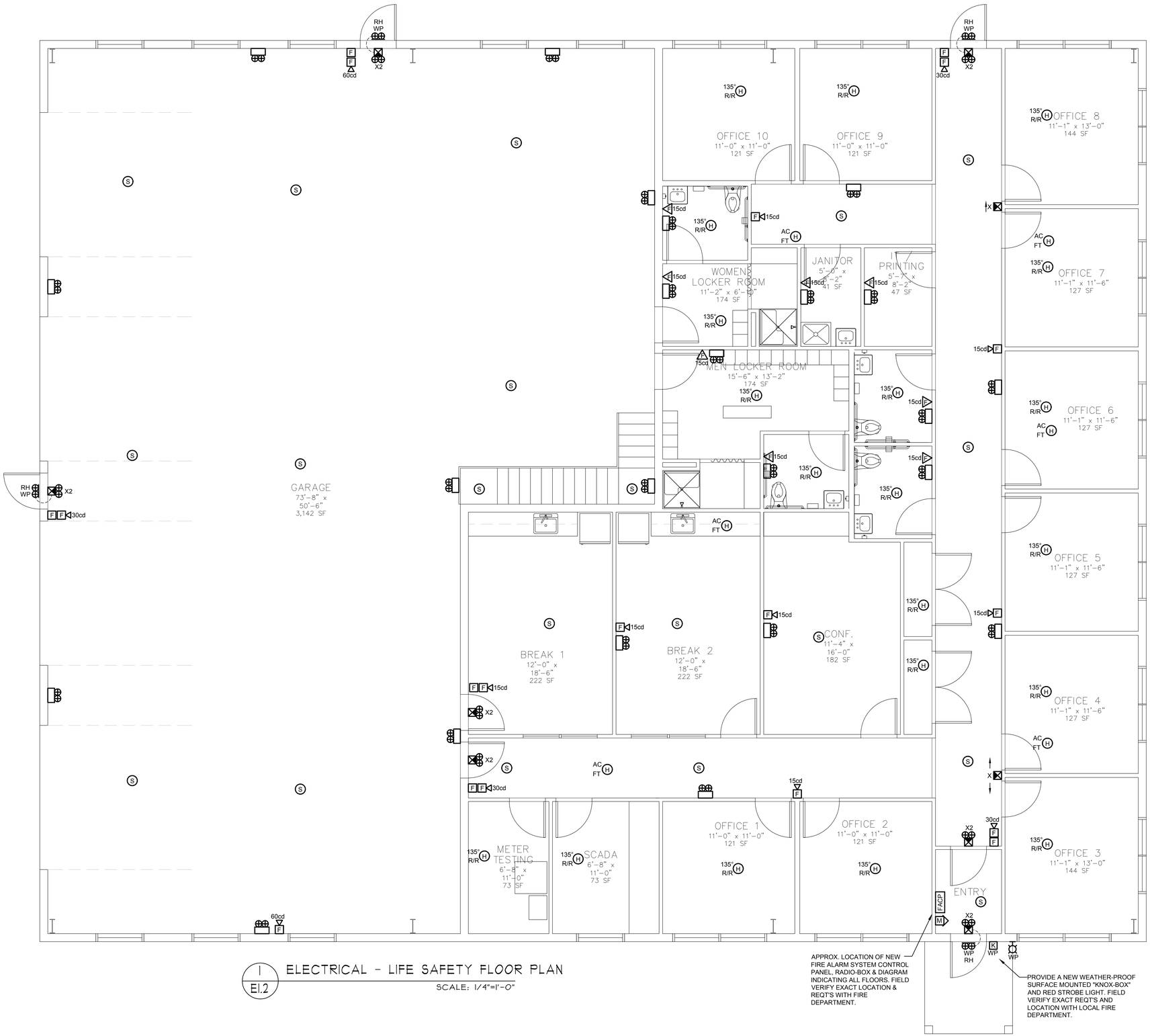
SHEET CONTENTS:

ELECTRICAL LIGHTING FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E1.1



1 / E1.2 ELECTRICAL - LIFE SAFETY FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Richmond Highway Stonington, CT 06378
Tel (401) 783-1629 Fax (401) 783-2994

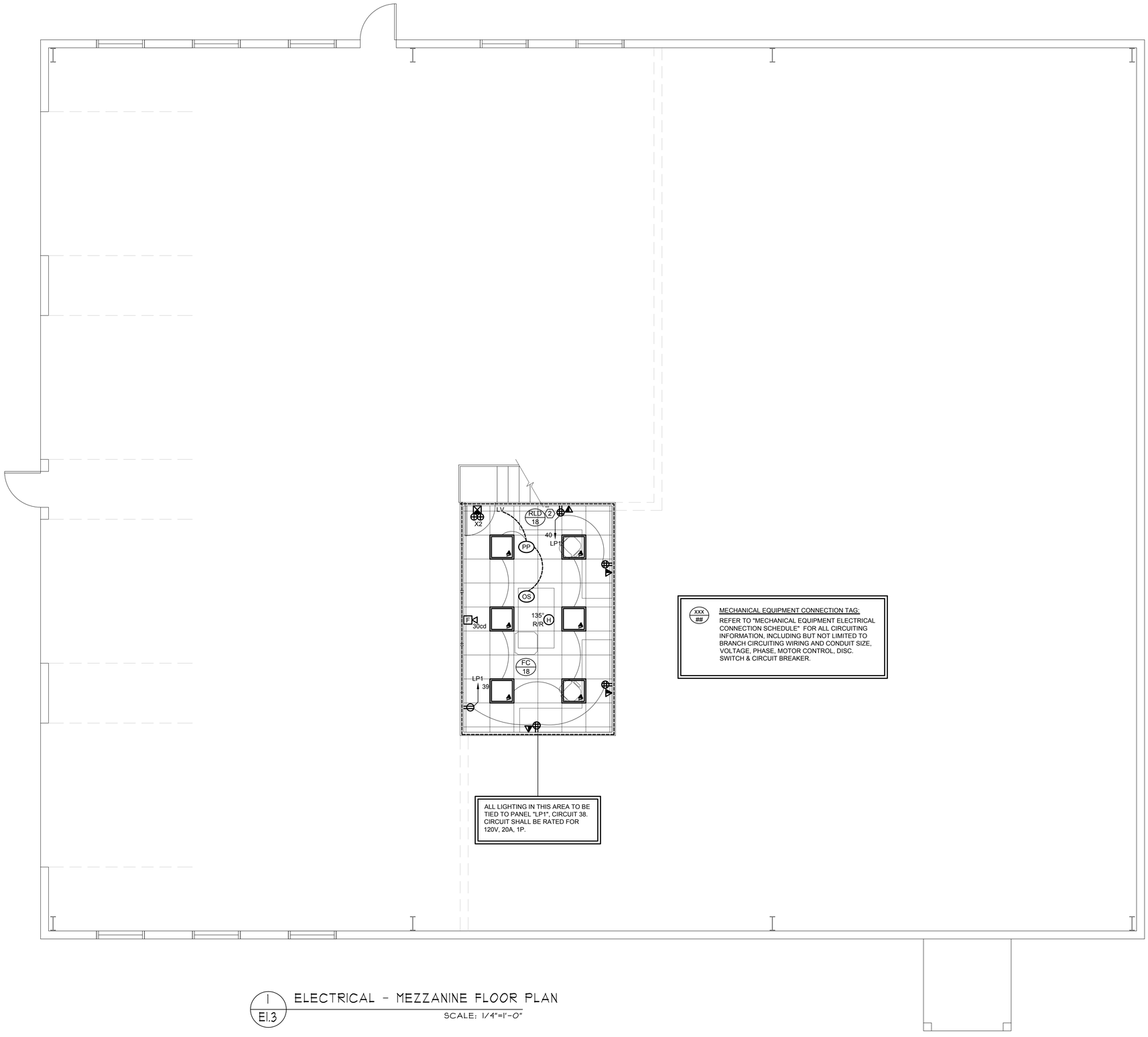
SHEET CONTENTS:

ELECTRICAL LIFE SAFETY FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E1.2



MECHANICAL EQUIPMENT CONNECTION TAG:
REFER TO "MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE" FOR ALL CIRCUITING INFORMATION, INCLUDING BUT NOT LIMITED TO BRANCH CIRCUITING WIRING AND CONDUIT SIZE, VOLTAGE, PHASE, MOTOR CONTROL, DISC. SWITCH & CIRCUIT BREAKER.

ALL LIGHTING IN THIS AREA TO BE TIED TO PANEL "LP1", CIRCUIT 38. CIRCUIT SHALL BE RATED FOR 120V, 20A, 1P.

1 / E1.3 ELECTRICAL - MEZZANINE FLOOR PLAN

SCALE: 1/4"=1'-0"

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Scituate, RI 02857
tel (401) 710-1001 Fax (401) 710-2936

SHEET CONTENTS:

ELECTRICAL MEZZANINE FLOOR PLAN

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

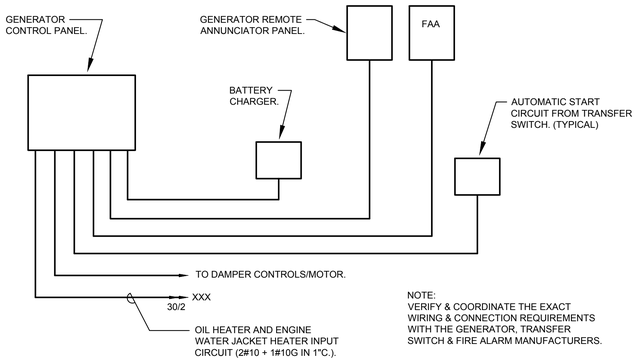
E1.3

BRANCH CIRCUIT PANELBOARD SCHEDULE

DESIGNATION (Building)	BUS AMPS	MAIN	LOCATION	VOLTAGE	PH	FEEDER & CONDUIT	BREAKERS						TOTAL POLES	MOUNTING	REMARKS
							USED			SPARE					
							1-POLE	2-POLE	3-POLE	1-POLE	2-POLE	3-POLE			
LP1	400/3	400/3	SEE FLR. PLANS	208Y/120	3	4#600KCMIL + 1#1/0 GND. IN 3-1/2" C.	UNLESS OTHERWISE SPECIFIED, E.C. SHALL ACQUIRE ALL BREAKER COUNTS FROM PANEL SCHEDULES. (TYPICAL)			-	-	-	84	SURFACE	65,000 A.I.C. DOUBLE-TUB. PROVIDE WITH SURGE PROTECTION DEVICE (SEE SPD NOTES ON THIS DRAWING).

NOTES:

1. ALL PANELBOARDS SHALL BE PROVIDED WITH AN ENGRAVED NAMEPLATE ON THE DOOR INDICATING THE PANELBOARD DESIGNATION, VOLTAGE, RATING OF MCB OR MAIN LUGS AND SOURCE OF SUPPLY. ENGRAVED PLATE SHALL BE AS CALLED FOR IN THE SPECIFICATIONS.
2. ALL PANELBOARDS SHALL BE PROVIDED WITH A TYPED (HAND WRITTEN IS NOT ALLOWED) CIRCUIT DIRECTORY INDICATING THE LOAD FED BY EACH CIRCUIT BREAKER AND ITS LOCATION IN THE BUILDING.
3. ALL PANELBOARDS SHALL BE PROVIDED WITH FULL SIZE EQUIPMENT GROUND AND NEUTRAL BUSSES ON EACH SIDE OF THE ENCLOSURE SO AS TO PROVIDE A SEPARATE EQUIPMENT GROUND AND NEUTRAL TERMINAL FOR EACH BRANCH CIRCUIT.
4. SPACES SHALL BE PROVIDED WITH ALL REQUIRED BUSSING, SUPPORTS, CONNECTORS, ETC.. NECESSARY FOR FUTURE INSTALLATION OF CIRCUIT BREAKERS.
5. FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH FIVE (5) EMPTY 1" EMT CONDUITS INSTALLED UP TO ABOVE ACCESSIBLE CEILING FOR FUTURE USE.
6. ALL PANELBOARDS SHALL HAVE HINGED "DOOR-IN-DOOR" TYPE COVERS.
7. REFER TO THE SPECIFICATIONS FOR ALL OTHER PANELBOARD REQUIREMENTS.



NOTE:
VERIFY & COORDINATE THE EXACT WIRING & CONNECTION REQUIREMENTS WITH THE GENERATOR, TRANSFER SWITCH & FIRE ALARM MANUFACTURERS.

EMERGENCY GENERATOR MISCELLANEOUS CONNECTIONS DETAIL

NOT TO SCALE

(PANEL / SWITCHBOARD / SERVICE) FEEDER SIZING

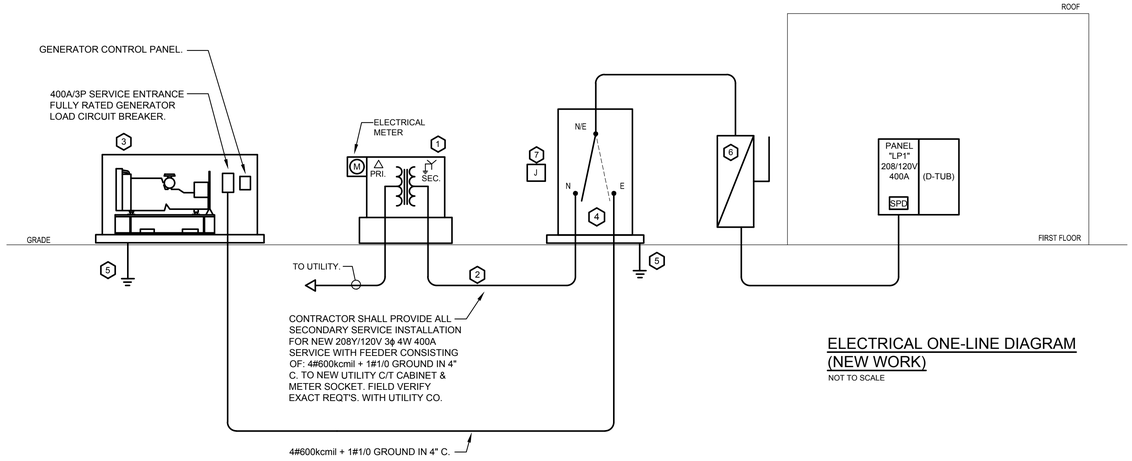
AMPERES	POLES	TYPE (XHHW) COPPER CONDUCTORS
30A	3	4#10 + 1#8 GND. IN 3/4" CONDUIT
60A	2	3#4 + 1#8 GND. IN 1" CONDUIT
60A	3	4#4 + 1#8 GND. IN 1-1/4" CONDUIT
100A	2	3#1 + 1#6 GND. IN 1-1/4" CONDUIT
100A	3	4#1 + 1#6 GND. IN 1-1/2" CONDUIT
125A, 150A	2	3#1/0 + 1#6 GND. IN 1-1/2" CONDUIT
125A, 150A	3	4#1/0 + 1#6 GND. IN 2" CONDUIT
200A	2	3#3/0 + 1#4 GND. IN 2" CONDUIT
200A	3	4#3/0 + 1#4 GND. IN 2" CONDUIT
225A	3	4#4/0 + 1#2 GND. IN 2-1/2" CONDUIT
300A	3	4#350kcmil + 1#2 GND. IN 3" CONDUIT
400A	3	4#600kcmil + 1#1/0 GND. IN 3-1/2" CONDUIT
600A	3	2 SETS OF: (4#350kcmil + 1#2 GND.) IN TWO (2) 3" CONDUITS
800A	3	2 SETS OF: (4#600kcmil + 1#1/0 GND.) IN TWO (2) 3-1/2" CONDUITS
1000A	3	3 SETS OF: (4#400kcmil + 1#1/0 GND.) IN THREE (3) 3" CONDUITS

(EQUIPMENT) SIZING CIRCUIT

AMP / POLE PANEL / SERVICE	POLES	TYPE (XHHW) COPPER CONDUCTORS
15A, 20A	1 (or) 2	2#12 + 1#12 GND. IN 3/4" CONDUIT
15A, 20A	3	3#12 + 1#12 GND. IN 3/4" CONDUIT
25A, 30A	1 (or) 2	2#10 + 1#10 GND. IN 3/4" CONDUIT
25A, 30A	3	3#10 + 1#10 GND. IN 3/4" CONDUIT
35A, 40A	1 (or) 2	2#8 + 1#10 GND. IN 3/4" CONDUIT
35A, 40A	3	3#8 + 1#10 GND. IN 3/4" CONDUIT
45A, 50A, 55A	1 (or) 2	2#6 + 1#10 GND. IN 3/4" CONDUIT
45A, 50A, 55A	3	3#6 + 1#10 GND. IN 3/4" CONDUIT
60A	2	2#4 + 1#10 GND. IN 1" CONDUIT
60A	3	3#4 + 1#10 GND. IN 1" CONDUIT
70A	3	3#4 + 1#8 GND. IN 1" CONDUIT
80A	3	3#3 + 1#8 GND. IN 1-1/4" CONDUIT
90A	3	3#2 + 1#8 GND. IN 1-1/4" CONDUIT
100A, 110A	3	3#1 + 1#6 GND. IN 1-1/4" CONDUIT
125A, 150A	3	3#1/0 + 1#6 GND. IN 1-1/2" CONDUIT
175A	3	3#2/0 + 1#6 GND. IN 2" CONDUIT
200A	3	3#3/0 + 1#4 GND. IN 2" CONDUIT

TYPICAL NOTE:

ALL NEW ELECTRICAL EQUIPMENT BUSSING, FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER. (TYPICAL)



ELECTRICAL ONE-LINE DIAGRAM (NEW WORK)

NOT TO SCALE

POWER ONE-LINE NOTES:

1. NEW UTILITY COMPANY PADMOUNT TRANSFORMER NOTES:
   a. TRANSFORMER FURNISHED AND INSTALLED BY UTILITY COMPANY.
   b. PRIMARY CONDUIT WITH PULL WIRE BY E.C.
   c. PRIMARY CABLE AND CONNECTIONS BY UTILITY COMPANY.
   d. SECONDARY CABLE & CONNECTIONS AT TRANSFORMER BY E.C. WITH UTILITY COMPANY SUPERVISION.
   e. TRANSFORMER CONCRETE PAD BY E.C.
   f. TRANSFORMER PAD GROUNDING BY E.C. SHALL BE IN ACCORDANCE W/ UTILITY COMPANY STANDARDS.
   g. E.C. SHALL PROVIDE ALL LABOR & MATERIAL REQUIRED BY NATIONAL GRID COMPANY FOR UTILITY COMPANY METERING.
2. TYPICAL UNDERGROUND SECONDARY ELECTRICAL SERVICE LATERAL. COORDINATE WITH LOCAL ELECTRICAL UTILITY COMPANY. CONTRACTOR TO PROVIDE AND INSTALL ALL GEAR, PEDESTALS, CONDUIT AND CONDUCTORS. ELECTRICAL UTILITY COMPANY WILL FURNISH AND INSTALL PRIMARY CONDUCTORS AND PAD MOUNTED TRANSFORMERS. (ELECTRICAL CONTRACTOR SHALL QUALIFY HIS/HER RESPONSIBILITIES WITH REGARD TO THIS IN HIS/HER INITIAL BID FOR ALL WORK RELATED TO THE PROJECT.) SEE POWER ONE-LINE DIAGRAM DRAWINGS FOR WIRE & CONDUIT SIZES.
3. DIESEL-FIRED, ENGINE DRIVEN 100kw @208Y/120V EMERGENCY GENERATOR (AS MANUFACTURED BY CATERPILLAR, KOHLER OR CUMMINS) IN MANUFACTURERS LEVEL 2 SOUND ATTENUATED WEATHERPROOF ENCLOSURE WITH A DBA RATING OF 75 AT 23'-0". PROVIDE REMOTE GENERATOR ANNUNCIATOR PANEL AT LOCATION DETERMINED BY THE FIRE DEPARTMENT & OWNER. PROVIDE GROUNDING AS REQUIRED PER NEC. THE EXACT LOCATION SHALL BE COORDINATED WITH THE BUILDING OWNER. UNIT SHALL BE TESTED TO MAXIMUM LOAD BEFORE DELIVERY TO THE SITE IN AN ISO 9001 CERTIFIED FACILITY. UNIT SHALL HAVE A FUEL EFFICIENCY, DESIGNED TO MEET EPA STATIONARY EMERGENCY (TIER 3) EMISSIONS STANDARDS. SEISMIC CERTIFICATION SHALL BE REQUIRED. PROVIDE WITH EMCP 4.2 CONTROL PANEL, WITH A USER-FRIENDLY INTERFACE. PROVIDE A 24-HOUR BASE FUEL TANK. PROVIDE REINFORCED CONCRETE PAD.
4. 400A/3-POLE AUTOMATIC TRANSFER SWITCH SHALL BE EQUAL TO ASCO SERIES 300 SE #300-J-03AUS-A-3-0400-N-M. PROVIDE GROUNDING AS REQUIRED PER NEC.
5. GROUND PER NATIONAL ELECTRICAL CODE, ARTICLE 250. (TYPICAL)
6. 400AF/400AT/3P/NEMA-3R FUSED DISCONNECT SWITCH SERVICE ENTRANCE RATED.
7. PROVIDE (2) 1-1/2" RIGID METAL CONDUITS FOR CONTROL WIRING BETWEEN THE J-BOX, AUTOMATIC TRANSFER SWITCH AND GENERATOR REMOTE ANNUNCIATOR PANEL.

SHORT CIRCUIT ANALYSIS NOTES:

THE E.C. SHALL PROVIDE A SHORT CIRCUIT ANALYSIS. REFER TO SPECIFICATIONS SECTION 26 00 00, "2.26 SHORT CIRCUIT/COORDINATION STUDY AND ARC FLASH RICK ASSESSMENT" FOR THE SCOPE OF WORK. THE WORK WILL BE PERFORMED BASED ON A DESIGN/BUILD APPROACH IN WHICH THE ELECTRICAL SUB-CONTRACTOR PROVIDES THE ENGINEERING NEEDED TO SATISFY PERFORMANCE CRITERIA AND OTHER REQUIREMENTS LISTED HEREIN. THE CRITERIA AND REQUIREMENTS ARE MEANT TO ESTABLISH THE GENERAL INTENT AND DO NOT ALWAYS GIVE SPECIFIC SIZES AND TYPES. THIS PROPOSAL MUST THEREFORE INCLUDE BOTH SYSTEM DESIGN AND ENGINEERING SERVICES.

SURGE PROTECTION DEVICE NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE SURGE PROTECTION DEVICES FOR ALL PANELBOARDS FOR THIS PROJECT.
2. PANELBOARDS SHALL BE PROVIDED WITH SIEMENS SURGE PROTECTIVE DEVICE MODEL #TPS3 11-15 FOR 208Y/120VOLT, 3-PHASE 4-WIRE INSTALLATION.
3. PANELBOARDS SHALL BE PROVIDED WITH SIEMENS SURGE PROTECTIVE DEVICE MODEL #TPS3 11-20 FOR 480Y/277VOLT, 3-PHASE 4-WIRE INSTALLATION.
4. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SURGE PROTECTIVE DEVICE MANUFACTURER FOR INSTALLATION & CONNECTION REQUIREMENTS PRIOR TO INSTALLATION.

COORDINATION NOTES:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, LOADCENTERS, DISCONNECT SWITCHES, METERING EQUIPMENT, ACCESSORIES, ETC NEEDED FOR A COMPLETE INSTALLATION WITH BRIAN KELLEY OF SIEMENS PRIOR TO BID. DETAILS, SIZES, NOTATIONS SHOWN ON ALL DRAWINGS ARE SUBJECT TO REVIEW AND COORDINATION WITH SIEMENS.

CONTACT INFORMATION FOR SIEMENS IS AS FOLLOWS:
SIEMENS - BRIAN KELLEY
10 RODMAN STREET
QUINCY, MA 02169
TEL. 860-208-8295
EMAIL: Briankelley@siemens.com

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerville, RI 02814
Tel (401) 710-3287 Fax (401) 710-3284

SHEET CONTENTS:

ELECTRICAL RISER

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E2.0

MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

XXX ## ITEM No.	DESCRIPTION	LOCATION	EQUIPMENT CHARACTERISTICS					CIRCUIT	CIRCUIT BREAKER (HACR TYPE)	FEEDER & CONDUIT	DISCONNECT SWITCH				MANUAL MOTOR CONTROLLER	REMARKS
			VOLTS	PH	FREQ.	KW/(HP	FLA				SIZE	FUSE	POLES	NEMA		
FC-1	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24	LP1/ 43,45	15/2P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-2	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-3	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-4	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-5	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-6	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-7	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-8	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-9	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-10	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-11	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-12	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.24			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-13	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-14	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-15	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-16	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-17	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.30			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-18	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.20			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-19	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.20			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-20	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	0.20			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
CU-1	HEAT PUMP (OUTDOOR)	(SEE PLANS)	208	3	60	-	41.0	LP1/44,46,48	60A/3P	3#4 + 1#10 GND. IN 1" CONDUIT	60	60	3	3R	PROVIDE "WP" DISCONNECT SWITCH WITH FUSING AS INDICATED.	SEE BELOW
ERV-1	ENERGY RECOVERY UNIT	(SEE PLANS)	208	1	60	-	5.2	LP/47,49	15A/2P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
BC-1	BRANCH CONTROLLER	(SEE PLANS)	208	1	60	-	1.57	LP1/50,52	15A/2P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
SBC-1	SUB-BRANCH CONTROLLER	(SEE PLANS)	208	1	60	-	0.7			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
FC-21	FAN COIL UNIT (INDOOR)	(SEE PLANS)	208	1	60	-	1.0	LP1/51,53	15A/2P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
CU-2	HEAT PUMP (OUTDOOR)	(SEE PLANS)	208	1	60	-	11.0			2#12 + 1#12 GND. IN 3/4" CONDUIT	30	15	2	3R	PROVIDE "WP" DISCONNECT SWITCH WITH FUSING AS INDICATED.	SEE BELOW
EWH-1	ELECTRIC WALL HEATER	(SEE PLANS)	208	1	60	(2.0)	10.0	LP1/54,56	15A/2P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
EWH-2	ELECTRIC WALL HEATER	(SEE PLANS)	120	1	60	(1.5)	12.9	LP1/55	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
GUH-1	GAS UNIT HEATER	(SEE PLANS)	120	1	60	0.6	2.4	LP1/57	15A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
GUH-2	GAS UNIT HEATER	(SEE PLANS)	120	1	60	0.6	2.4			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
GUH-3	GAS UNIT HEATER	(SEE PLANS)	120	1	60	0.6	2.4	LP1/58	15A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
GUH-4	GAS UNIT HEATER	(SEE PLANS)	120	1	60	0.6	2.4			2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
EF-1	EXHAUST FAN	(SEE PLANS)	120	1	60	1/4	5.8	LP1/59	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
EF-2	EXHAUST FAN	(SEE PLANS)	120	1	60	3/4	13.8	LP1/60	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
DF-1	DESTRAT. FAN	(SEE PLANS)	120	1	60	3/4	13.8	LP1/61	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
DF-2	DESTRAT. FAN	(SEE PLANS)	120	1	60	3/4	13.8	LP1/62	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
M-1	MOTORIZED DAMPERS	(SEE PLANS)	120	1	60	3/4	13.8	LP1/63	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
WH-1	ELECTRIC WATER HEATER	(SEE PLANS)	208	1	60	-	30.0	LP1 / 65,67	30A/2P	3#10 + 1#10 GND. IN 3/4" CONDUIT	30	30	2	3R	PROVIDE "WP" DISCONNECT SWITCH WITH FUSING AS INDICATED.	SEE BELOW
WH-2	ELECTRIC WATER HEATER	(SEE PLANS)	120	1	60	-	-	LP1/66	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW
RC-1	RECIRC. PUMP	(SEE PLANS)	120	1	60	-	-	LP1/68	20A/1P	2#12 + 1#12 GND. IN 3/4" CONDUIT	-	-	-	-	PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERRIDES.	SEE BELOW

NOTES:

1. COORDINATE WITH HVAC CONTRACTOR & DRAWINGS FOR EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT PRIOR TO INSTALLING ELECTRICAL COMPONENTS.
2. COORDINATE WITH PLUMBING CONTRACTOR & DRAWINGS FOR EXACT LOCATIONS OF ALL PLUMBING EQUIPMENT PRIOR TO INSTALLING ELECTRICAL COMPONENTS.
3. ALL DISCONNECTING MEANS SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
4. ALL STARTERS, VFD'S ETC. SHALL BE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE ALL HVAC EQUIPMENT.
5. ALL HVAC CONTROL WIRING SHALL BE PROVIDED BY OTHERS.

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Scarborough, ME 04074
Tel (401) 765-1509 Fax (401) 765-0264

SHEET CONTENTS:

ELECTRICAL SCHEDULES & DETAILS

PROJECT # 4222

DATE: 08/07/2023
REVISED DATE:

E2.1

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG No.	MOUNTING	LAMPING			VOLTAGE	DESCRIPTION / REMARKS
				TYPE	WATTAGE	QUANTITY		
A	LITHONIA LIGHTING	2VTL2 40L ADPT EZ1 LP80	RECESSED	LED	20/28/39	1	120	2X2 RECESSED LED PANEL
B	LITHONIA LIGHTING	CPHN 24LM MVOLT 50K	HUNG	LED	174	1	120	HIGH BAY LED FIXTURE
C	LITHONIA LIGHTING	LDN6-AL02-SWW1-MVOLT-UGZ-HSG	RECESSED	LED	19	1	120	6" RECESSED DOWN LIGHT, SUITABLE FOR WET LOCATIONS.
D	LITHONIA LIGHTING	WDGE LED P2 35K 80CRI MVOLT	WALL	LED	4	1	120	EXTERIOR 9" WALL MOUNT LED FIXTURE
E	LITHONIA LIGHTING	WDGE3 LED P2 40K 80CRI MVOLT	WALL	LED	4	1	120	EXTERIOR 18" WALL MOUNT LED FIXTURE
F	LITHONIA LIGHTING	W 2 17 MVOLT LP835	WALL	LED	4	1	120	24" WALL MOUNT LED FIXTURE
G	NUTONE LIGHTING	MODEL 763N	RECESSED	LED	1.6	1	120	RECESSED VENTILATION FAN WITH LIGHT, SUITABLE FOR WET LOCATIONS.

NOTES:
1. PROVIDE ACCESSORIES AND MOUNTING HARDWARE AS REQUIRED FOR ALL FIXTURES.
2. ALL FIXTURE/ACCESSORY COLORS NOT INDICATED ON DRAWING'S SHALL BE SELECTED BY ARCHITECT.
3. PROVIDE LAMPING FOR ALL FIXTURES UNLESS LAMPING IS INCLUDED WITH FIXTURE AS INDICATED IN SCHEDULE.
4. PROVIDE TYPICAL UNIT MOCK UP FOR LIGHT FIXTURE HANGING HEIGHTS AND EXPOSED ELECTRICAL CONDUIT LAYOUT TO BE REVIEWED BY ARCHITECT.
5. FIXTURE TO BE WIRED TO PHOTO CELL AND TIME CLOCK PROVIDED BY G.C.
6. ALL LIGHT FIXTURES WITH INCANDESCENT LAMPING SHALL BE PROVIDED W/ CFL/LED LAMP IN LIEU OF INCANDESCENT LAMP.
7. THE ELECTRICAL CONTRACTOR SHALL VERIFY COLOR & FINISH WITH ARCHITECT PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
8. CC = CUSTOM COLOR TO BE SELECTED BY ARCHITECT (THE ELECTRICAL CONTRACTOR SHALL VERIFY CUSTOM COLOR & FINISH WITH ARCHITECT PRIOR TO SUBMITTAL OF SHOP DRAWINGS.

MANUFACTURER CONTACT:
BOSTON LIGHT SOURCE
LIZ McDONOUGH1-617-788-2400
EMAIL: LMCDONOUGH@bostonlightsource.com

PANELBOARD SCHEDULE "NEW LP1" (1 OF 2)

MAIN: 400 **VOLTAGE:** 208Y/120
BUSSING: 400 **AIC RATING:** 65k
LOAD (KVA) **LOAD (KVA)**

DESCRIPTION	øA	øB	øC	breaker	NO.	ø	NO.	breaker	øA	øB	øC	DESCRIPTION
OVERHEAD DOOR 1	1.00			20/1	1	A	2	20/1	1.00			OVERHEAD DOOR 2
OVERHEAD DOOR 3		1.00		20/1	3	B	4	20/1		1.00		OVERHEAD DOOR 4
GARAGE REC.			1.20	20/1	5	C	6	20/1			1.00	FAN SPEED CONTROL
ELECTRIC GFI	0.20			20/1	7	A	8	20/1	1.40			GARAGE REC. 2
RLD.		0.40		20/1	9	B	10	20/1		1.00		OFFICE 10 REC.
OFFICE 9 REC.			1.00	20/1	11	C	12	20/1			1.20	CORRIDOR REC.
IT PRINT REC.	1.20			20/1	13	A	14	20/1	0.60			WOMAN LOCKER REC.
MEN LOCKER REC.		0.80		20/1	15	B	16	20/1		1.00		OFFICE 3 REC.
OFFICE 4 REC.			1.00	20/1	17	C	18	20/1			1.00	OFFICE 5 REC.
OFFICE 6 REC.	1.00			20/1	19	A	20	20/1	1.00			OFFICE 7 REC.
OFFICE 8 REC.		1.00		20/1	21	B	22	20/1		1.00		OFFICE 1 REC.
OFFICE 2 REC.			1.00	20/1	23	C	24	20/1			1.20	SCADA REC.
METER TEST. REC.	0.60			20/1	25	A	26	20/1	1.40			CONF. REC
BREAK 1 REC.		1.00		20/1	27	B	28	20/1		0.20		FRIDGE 1.
BREAK 2 REC.			1.00	20/1	29	C	30	20/1			0.20	FRIDE 2.
BOTTLE FILLING REC.	0.20			20/1	31	A	32	20/1				SPARE
SPARE				20/1	33	B	34	20/1				SPARE
EXTERIOR LIGHTING			1.00	20/1	35	C	36	20/1			1.00	LIGHTS 1
LIGHTS 2	1.60			20/1	37	A	38	20/1	0.60			Mezz Lights
Mezz. 1 Rec.		1.00		20/1	39	B	40	20/1		0.80		Mezz. 2 Rec.
Ext/Vest rec.			0.60	20/1	41	C	42	20/1				SPARE
	5.80	5.20	6.80	← TOTAL/PHASE →					6.00	5.00	5.60	

TOTAL (KVA): 34.40
TOTAL AMP: 206.91

PANELBOARD SCHEDULE "NEW LP1" (1 OF 2)

MAIN: 400 **VOLTAGE:** 208Y/120
BUSSING: **AIC RATING:** 65k
LOAD (KVA) **LOAD (KVA)**

DESCRIPTION	øA	øB	øC	breaker	NO.	ø	NO.	breaker	øA	øB	øC	DESCRIPTION
FC1-FC20	0.50			15/2	43	A	44	60/3	4.90			CU-1
		0.50			45	B	46			4.90		
ERV-1			0.52	15/2	47	C	48				4.90	
	0.52				49	A	50	15/2	0.20			SBC-1/BC-1
FC-21/CU-2		1.20		15/2	51	B	52			0.20		
			1.20		53	C	54	20/1			1.00	EWH-1
EWH-2	1.50			20/1	55	A	56		1.00			
GUH-1/GUH-2		0.60		15/1	57	B	58	15/1		0.60		GUH-3/GUH-4
EF-1			0.70	20/1	59	C	60	20/1			1.70	EF-2
DF-1	1.70			20/1	61	A	62	20/1	1.70			DF-2
M-1		1.70		20/1	63	B	64	20/1		0.20		RTU REC.
WH-1			3.10	30/1	65	C	66	20/1			1.00	WH-2
	3.10				67	A	68	20/1	1.00			RC-1
				20/1	69	B	70	20/1				
				20/1	71	C	72	20/1				
				20/1	73	A	74	20/1				
				20/1	75	B	76	20/1				
				20/1	77	C	78	20/1				
				20/1	79	A	80	20/1				
				20/1	81	B	82	20/1				
				20/1	83	C	84	20/1				
	7.32	4.00	5.52	← TOTAL/PHASE →					8.80	5.90	8.60	

TOTAL (KVA): 40.14
TOTAL AMP: 111.42

ISSUED FOR BIDDING

Ed Wojcik architect, ltd
One Richmond Square
Providence, RI 02906
401 861 7139
Fax: 401 861 7165

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Roy Ave
Woonsocket, RI 02845

ENGINEERING DESIGN SERVICES INCORPORATED
141 Industrial Highway Somerset, RI 02824
Tel (401) 510-1001 Fax (401) 510-2004

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ELECTRICAL SCHEDULES & DETAILS

PROJECT # 4222

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E2.2