

PROPOSED



PLAT MAP 38, BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA
BOOK 69210, PAGE 201

ENGINEERS



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

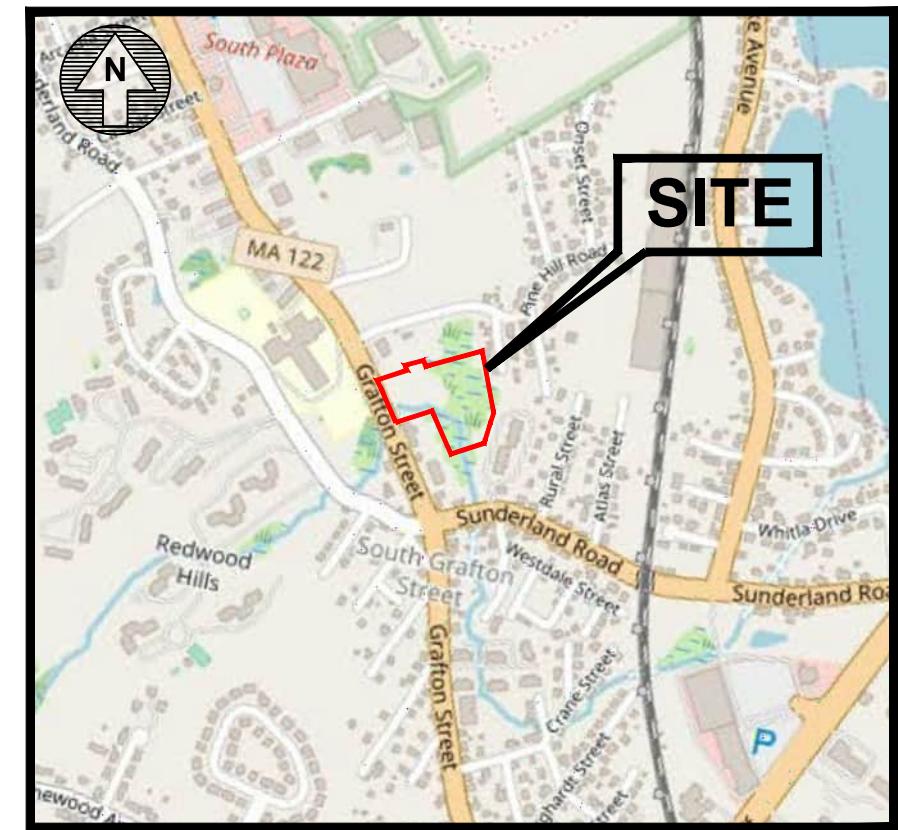
CROSSMAN ENGINEERING

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 151 Centerville Road 103 Commonwealth Avenue
 Warwick, RI 02886 North Attleboro, MA 02763
 Phone: (401) 738-5660 Phone: (508) 695-1700

Email: cei@crossmaneng.com

OWNER/APPLICANT

1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023



LOCATION MAP
 SCALE: 1"=1,000'

INDEX OF DRAWINGS

<u>DRAWING No.</u>	<u>PLAN</u>
C1	GENERAL NOTES and LEGEND
C2	AERIAL MAP and CONSERVATION AREA
C3	RADIUS MAP
C4	EXISTING CONDITIONS PLAN
C5	SITE LAYOUT PLAN
C6	GRADING and DRAINAGE PLAN
C7	UTILITY PLAN
C8	SOIL EROSION and SEDIMENT CONTROL PLAN
C9	MISCELLANEOUS DETAILS PLAN No. 1
C10	MISCELLANEOUS DETAILS PLAN No. 2
C11	MISCELLANEOUS DETAILS PLAN No. 3
C12	MISCELLANEOUS DETAILS PLAN No. 4
C13	MISCELLANEOUS DETAILS PLAN No. 5
C14	MISCELLANEOUS DETAILS PLAN No. 6
E1	LIGHTING PLAN
L1	LANDSCAPE PLAN
L2	LANDSCAPE DETAIL PLAN
A1	CONCEPTUAL FLOOR PLAN
A2	BUILDING ELEVATIONS
A3	PERSPECTIVES

REFERENCE

ALTA SURVEY

REVISIONS

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

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GENERAL NOTES

- 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 MASSACHUSETTS 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.
- IN ADDITION TO THE CONTRACT DOCUMENTS, SPECIFICATIONS TO GOVERN THIS PROJECT ARE MASSACHUSETTS STANDARD SPECIFICATIONS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE INSTALLATION, HOT MIX ASPHALT PAVEMENT, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT (DEPARTMENT OF TRANSPORTATION) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, BOSTON MASSACHUSETTS, INCLUDING LATEST REVISIONS AND SUPPLEMENTAL SPECIFICATIONS.
- 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.
- 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, AND 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.
- 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.
- ALL DISTURBED AREAS SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN OR OTHERWISE INSTRUCTED IN WRITING BY THE OWNER.
- CONTRACTOR SHALL EXCAVATE TEST PITS TO CONFIRM UTILITY LOCATIONS/ELEVATIONS AT POTENTIAL CONFLICT POINTS (UTILITY/DRAIN CROSSINGS).
- 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.
- 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.
- CHANGE ORDERS MAY ONLY BE APPROVED FOR PAYMENT BY THE OWNER.
- 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.
- WATER GENERATED AS A RESULT OF TRENCH DEWATERING SHALL BE DISCHARGED TO EXISTING DRAINAGE STRUCTURES. CONTRACTOR SHALL PROVIDE, AT NO ADDITIONAL EXPENSE, ADEQUATE EROSION CONTROL, FRAC TANKS OR SEDIMENTATION CONTROLS SUBJECT TO THE APPROVAL OF THE CONSERVATION COMMISSION.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE CITY OR WORCESTER DEPARTMENT OF PUBLIC WORKS. ALL EXCAVATION, BACKFILL AND RESTORATION WORK SHALL MEET THE TOWN'S SPECIFICATIONS.
- 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.
- 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.
- 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.
- 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 TOWN.

STANDARD NOTES

- 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.
- 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.
- 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.
- 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.
- 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, LOAM AND SEED 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 WITH THE PERMISSION OF THE ENGINEER.
- 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.
- 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.
- 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.
- 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.
- 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.

FLOOD ZONE NOTE

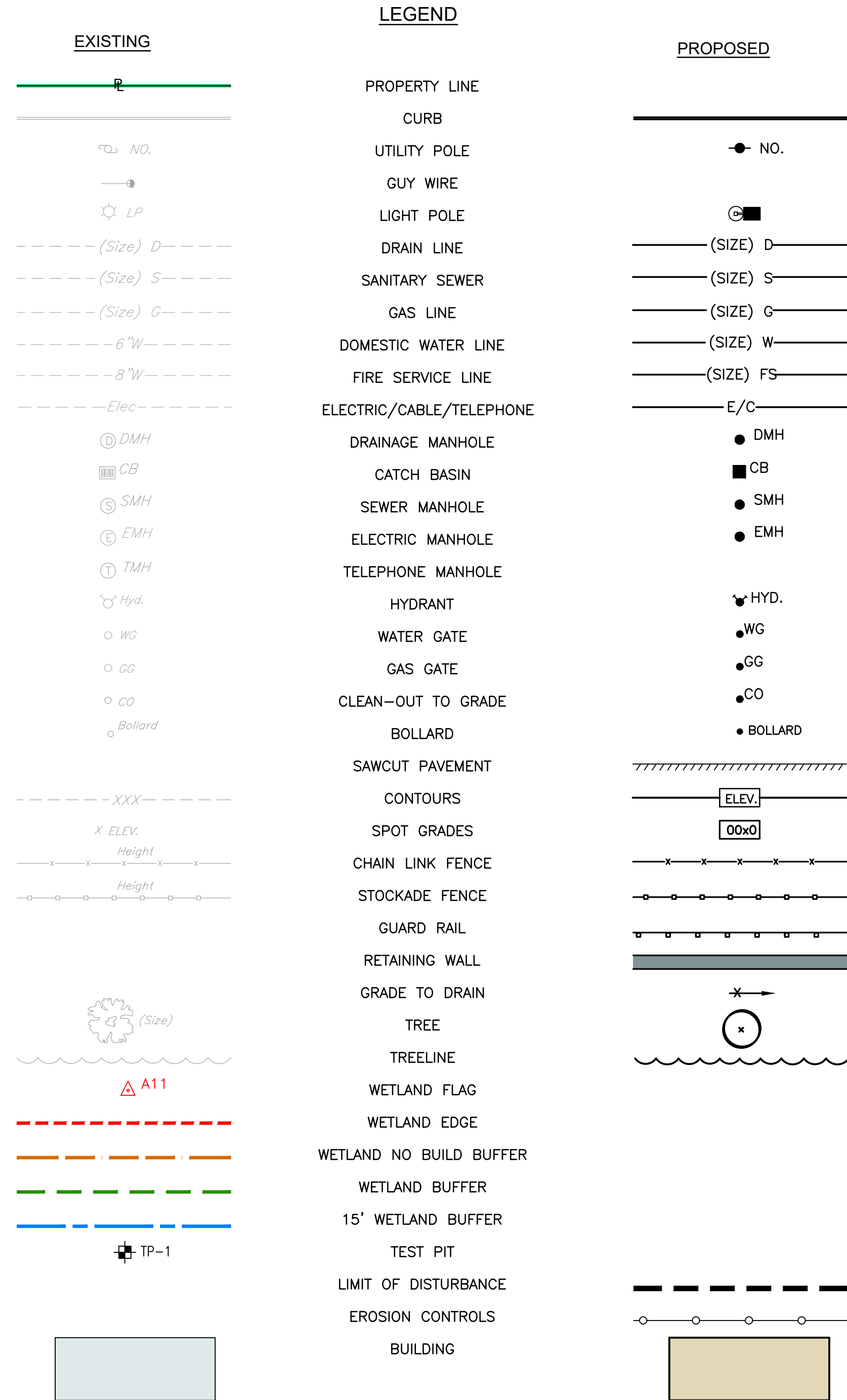
THE PROPOSED WORK AREA IS LOCATED WITHIN FLOOD ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD. FLOOD ZONE INFORMATION IS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR WORCESTER COUNTY, MASSACHUSETTS (ALL JURISDICTIONS), PANEL 807 OF 1075, MAP NUMBER 25027C0807E, EFFECTIVE DATE: JULY 4, 2011.

PROPOSED PAVEMENT STRUCTURE

- 1-1/2" HOT MIX ASPHALT SURFACE COARSE
- 2-1/2" HOT MIX ASPHALT BINDER COURSE
- 12" GRAVEL BORROW SUBBASE

UTILITY NOTES

- PRIOR TO ANY UTILITY CONSTRUCTION, THE CONTRACTOR MUST PERFORM ADDITIONAL TESTS TO:
 - CONFIRM THE EXISTING DEPTHS OF UTILITIES AT ALL PROPOSED CONNECTION POINTS AND POTENTIAL CROSSOVER (CONFLICT) POINTS.
 - 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 REMOVAL AND UTILITY CONFLICTS WILL BE DEVELOPED. NO CONSTRUCTION WILL BE ALLOWED WITHOUT THE OWNER'S AUTHORIZATION.
 - THE CONTRACTOR SHALL DIG TEST HOLES TO VERIFY THE ELEVATIONS AND PIPE MATERIAL OF THE EXISTING WATER, GAS AND SANITARY SERVICES AT THE PROPOSED TIE-IN LOCATION.
- 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.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO TIE-IN.
- THIS UTILITY PLAN DOES NOT REPRESENT THE SITE ELECTRICAL/TELEPHONE/COMMUNICATION SYSTEM DESIGNS AND DOES NOT REPRESENT IRRIGATION PIPING. CONTRACTOR SHALL COORDINATE WITH OWNER TO VERIFY IRRIGATION PIPING REQUIREMENTS.
- THE CONTRACTOR MUST LOCATE THE EXISTING WATER MAIN TO OBTAIN THE PROPER OUTSIDE DIAMETER TO SIZE THE SLEEVE.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL UTILITY PIPE SIZES INCLUDING WATER, SEWER AND GAS ARE VERIFIED BY THE ARCHITECT PRIOR TO ORDERING PIPE OR RELATED MATERIAL.
- ALL PROPOSED PIPES AND CONDUITS SHALL BE INSTALLED TO MEET H=20 LOADING CAPACITY. ALL MATERIAL AND TRENCHING METHODS SHALL CONFORM TO H=20 LOADING CAPACITIES. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/CATALOG CUTS FOR PROPOSED PIPE AND CONDUIT TO ENGINEER FOR APPROVAL.



SOIL EVALUATION DATA

SOIL EVALUATIONS WERE CONDUCTED BY CROSSMAN ENGINEERING ON APRIL 27, 2023.

TEST PIT 1	TEST PIT 2	TEST PIT 3	TEST PIT 4	TEST PIT 5	TEST PIT 6
0" - 8" : 10YR 3/1 Sandy Loam Mixed With Boulders 8" - 158" : 10YR 3/3 Sandy Loam Mixed with Stones, Boulders, Broken Ledge Pieces, Brick and Concrete NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE	0" - 8" : 7.5YR 2.5/1 Sandy Loam 8" - 156" : 10YR 3/3 Fine Sandy Loam Mixed with Broken Ledge Pieces, Brick and Boulders NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE	0" - 12" : 10YR 3/2 Sandy Loam 12" - 41" : 10YR 3/4 Stony Sandy Loam 41" - 146" : 10YR 3/3 Sandy Loam Mixed with Stones, Brick, Metal and Concrete NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE	0" - 9" : N/A Boulders Stockpiled 9" - 21" : 10YR 3/4 Sandy Loam 21" - 144" : 10YR 3/3 Sandy Loam Mixed with Stones, Brick, Metal and Concrete NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE	0" - 6" : 10YR 3/2 Sandy Loam 6" - 135" : 10YR 3/3 Sandy Loam Mixed with Stones, Brick, Boulders, Concrete and Large Tree Roots NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE	0" - 8" : 10YR 3/2 Sandy Loam 8" - 121" : 10YR 3/3 Sandy Loam Mixed with Stones, Brick, Tree Stumps Concrete and Bituminous NO REFUSAL NO REDOX FEATURES NO GROUNDWATER SEEPAGE ESHWT=84" BELOW GRADE

Crossman Engineering
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 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700
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KEY PLAN

PROJECT TITLE:
PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:
1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023


DRAWING TITLE:
GENERAL NOTES
and LEGEND

DATE: JUNE 2023	SCALE: NO SCALE
DWG. NAME: M280-C01-NOTE-R3.dwg	

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C1
 SHEET: 2 OF: 21

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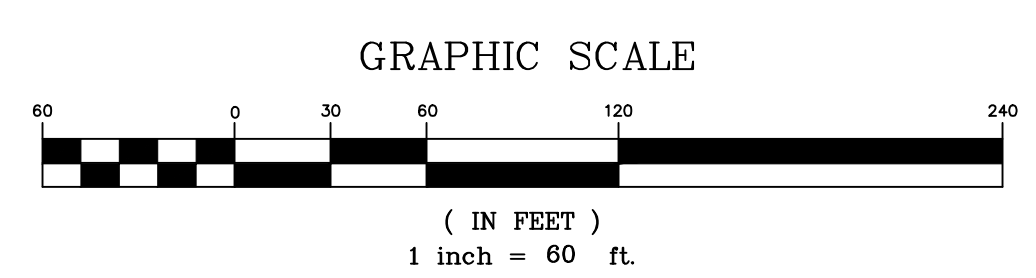
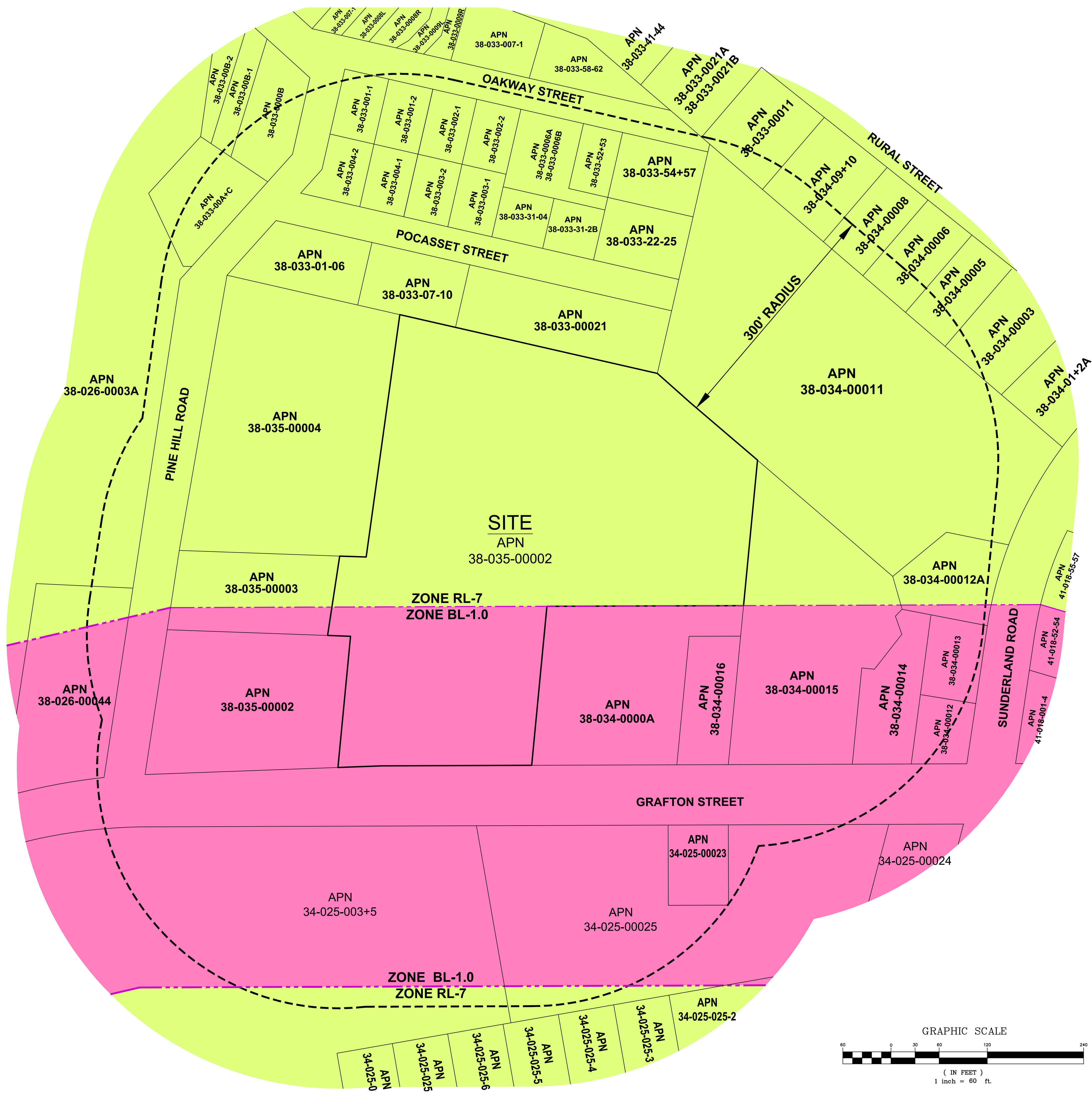
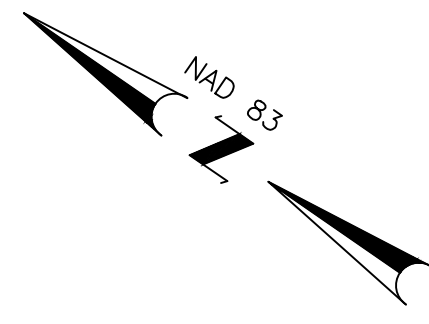
PREPARED FOR:
**1059 GRAFTON STREET, LLC
 C/O BASS, DOHERTY & FINKS, P.C.
 1380 SOLDIERS FIELD ROAD
 BOSTON, MA 02135-1023**

DRAWING TITLE:
**AERIAL MAP and
 CONSERVATION AREA**

DATE: JUNE 2023 SCALE: 1"=40'
 DWG. NAME: M280-CO2-AERIAL-R3.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	PLANNING BOARD COMMENTS	08/01/23
2	2	CITY COMMENTS	08/18/23
3	3	SEWER/CONNECTION	01/25/24

DRAWING NUMBER
C2
 SHEET: 3 OF 21



Crossman Engineering
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PROPOSED CAR WASH
 PLAT MAP 38,
 BLOCK 35 LOT 2
 ZONING DISTRICTS: BL-1.0 and RL-7
 BUSINESS LIMITED and
 SINGLE FAMILY DISTRICT
 1059 GRAFTON STREET
 WORCESTER, MA

PREPARED FOR:
1059 GRAFTON STREET, LLC
 C/O BASS, DOHERTY & FINKS, P.C.
 1380 SOLDIERS FIELD ROAD
 BOSTON, MA 02135-1023

DRAWING TITLE:
RADIUS MAP

DATE: JUNE 2023 SCALE: 1"=60'
 DWG. NAME: M280-C03-RADIUS-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C3
 SHEET: 5 OF 21



Crossman Engineering

Rhode Island
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Warwick, RI 02886
Phone (401) 738-6660

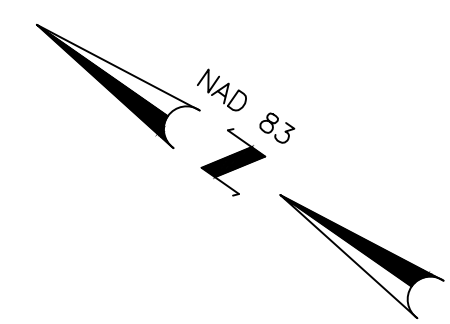
Massachusetts
103 Commonwealth Avenue
North Attleboro, MA 02763
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AERIAL PHOTO
NOT TO SCALE



PLAN NOTES

1. EXISTING CONDITIONS SURVEY PLAN INFORMATION TAKEN FROM A PLAN TITLED "ALTA/NSPS LAND TITLE SURVEY, 1059 GRAFTON STREET, WORCESTER COUNTY, WORCESTER, MASSACHUSETTS, 01604" DATED DECEMBER 28, 2022, SCALE 1"=20' BY BLEW & ASSOCIATES, P.A., 3825 N. SHILOH DRIVE, FAYETTEVILLE, AR 72703.

N/F HO, HUONG S +
12 PINE HILL ROAD
WORCESTER
MASSACHUSETTS 01604
APN: 38_035_00003
BOOK 35029, PAGE 0169

S 21°12'00" E 200.00'(R1)
S 32°24'03" E 200.00'(M)

S 32°24'03" E 228.57'(M)
S 21°12'00" E 228.57'(R1)

N 21°12'00" W 33.03'(R1)
S 32°24'03" E 33.03'(M)

N 75°26'00" E 100.00'(R1)
N 64°13'57" E 100.00'(M)

N 21°12'00" W 28.57'(R1)
N 32°24'03" W 28.57'(M)

S 72°14'40" W 164.15'(R1)
S 61°02'37" W 164.16'(M)

N 25°20'20" W 240.40'(R1)
N 36°32'23" W 240.40'(M)

N 36°32'23" W 294.82'(M)
N 25°20'20" W 294.80'(R1)

N 25°20'20" W 54.39'(R1)
N 36°32'23" W 54.42'(M)

N 34°38'23" W 187.00'(M)
N 23°26'20" W 187.00'(R1)

S 61°02'37" W 199.00'(M)
S 72°14'40" W 199.00'(R1)

N 34°38'23" W 245.00'(M)
N 23°26'20" W 245.00'(R1)

TOTAL AREA
192,718± SQ FEET
4.424± ACRES
VACANT LAND

NOTE:
THERE ARE NO 9" CALIBER TREES WITHIN
THE PROPOSED DISTURBANCE AREA

N/F ALCOTT MANAGEMENT COMPANY
1099 GRAFTON STREET
WORCESTER
MASSACHUSETTS 01604
APN: 38_034_0000A
BOOK 04159, PAGE 0347

N/F PIZZARELLA, ANGELO TRUSTEE
1059 GRAFTON STREET
WORCESTER
MASSACHUSETTS 01604
APN: 38_035_00002
BOOK 61607, PAGE 0065

TBM No. 2
SET MAG-SPIKE IN UTILITY POLE
NORTHING: 2913618.30
EASTING: 586990.78
ELEVATION=457.58

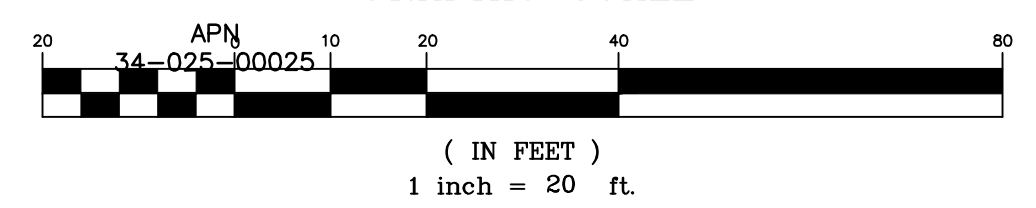
TBM No. 1
SET MAG-SPIKE IN PAVEMENT
NORTHING: 2913460.59
EASTING: 587105.68
ELEVATION=453.08

GRAFTON STREET
75' PUBLIC RIGHT-OF-WAY

EXISTING
HYDRANT

APN
34-025-003+5

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

KEY PLAN

PROJECT TITLE:

PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
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DRAWING TITLE:

**EXISTING
CONDITIONS PLAN**

DATE: JUNE 2023 SCALE: 1"=20'

DWC. NAME: M280-C04-EXCN-R3.dwg

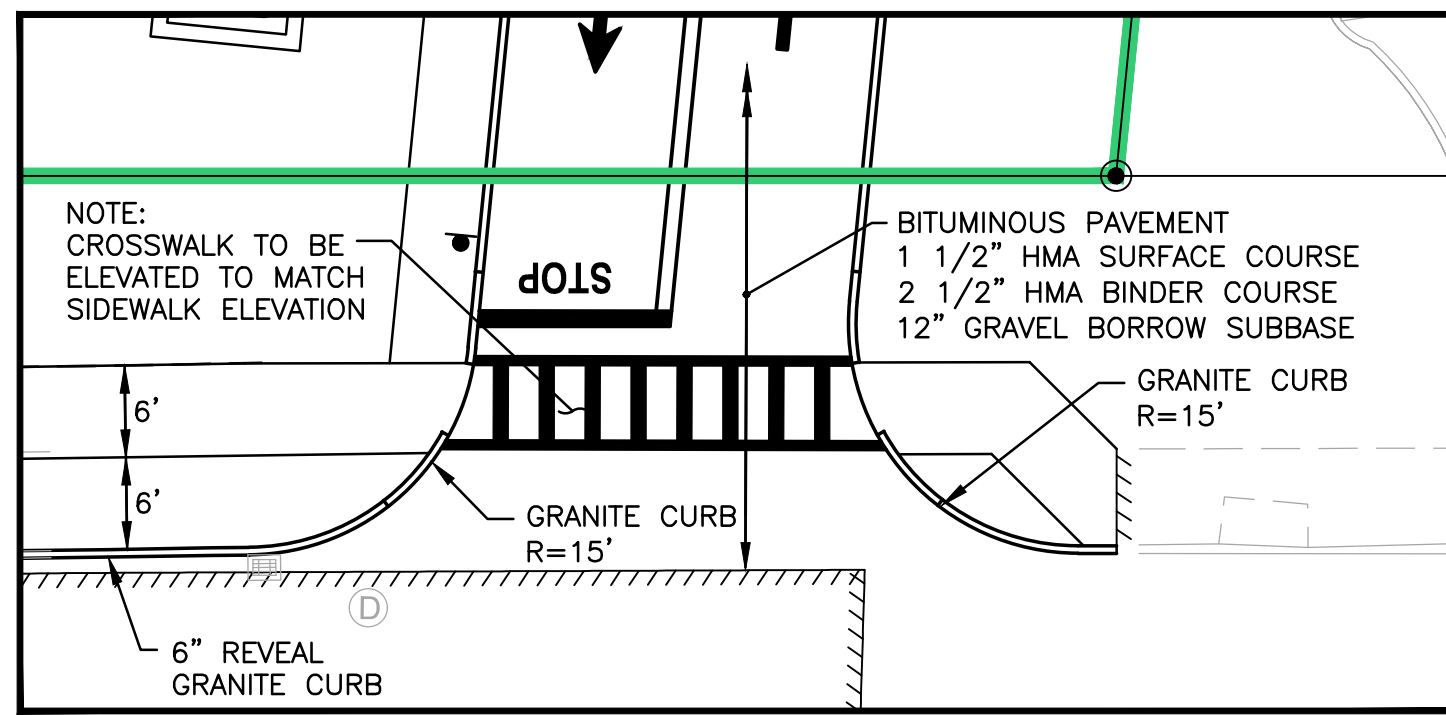
REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER

C4

SHEET: 5 OF 21



CURB CUT DETAIL
NOT TO SCALE

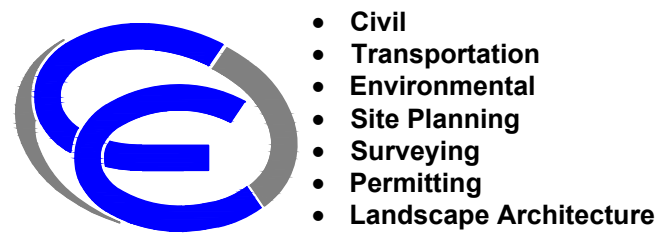
DIMENSIONAL REGULATIONS
ZONING DISTRICT: BUSINESS LIMITED BL-1.0

USE	REQUIRED	PROPOSED
CARWASH		
MINIMUM LOT AREA	N/A	192,718 SF
MINIMUM FRONTAGE	N/A	241.4 FT
MINIMUM FRONT YARD	10 FT	95.2 FT
MINIMUM SIDE YARD	10 FT	55.9 FT
MINIMUM REAR YARD	20 FT	116.6 FT
MAXIMUM BUILDING STORIES	3	1
MAXIMUM BUILDING HEIGHT	40	< 40 FT
MAXIMUM FLOOR TO AREA RATIO	1:1	1:48.8

PARKING REQUIREMENTS
TABLE 4.4: DRIVE UP SERVICE
1 PER BAY/STALL USED FOR SERVICE PLUS THREE (3) OFF-STREET
WAITING SPACES PLUS ONE (1) SPACE BEYOND SERVICE EXIT
REQUIRED SPACES = 5 SPACES
PROVIDED SPACES = 21 SPACES

ADA PARKING SPACES REQUIRED = 1
ADA PARKING SPACES PROVIDED = 1

EV READY SPACES
ALL VACUUM SPACES WILL HAVE CONDUIT FOR FUTURE EV INSTALLATIONS.



Crossman Engineering

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

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KEY PLAN

PROJECT TITLE:

PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:

1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

DRAWING TITLE:

SITE LAYOUT PLAN

DATE: JUNE 2023 SCALE: 1"=20'

DWC. NAME: M280-C05-SITE-R3.dwg

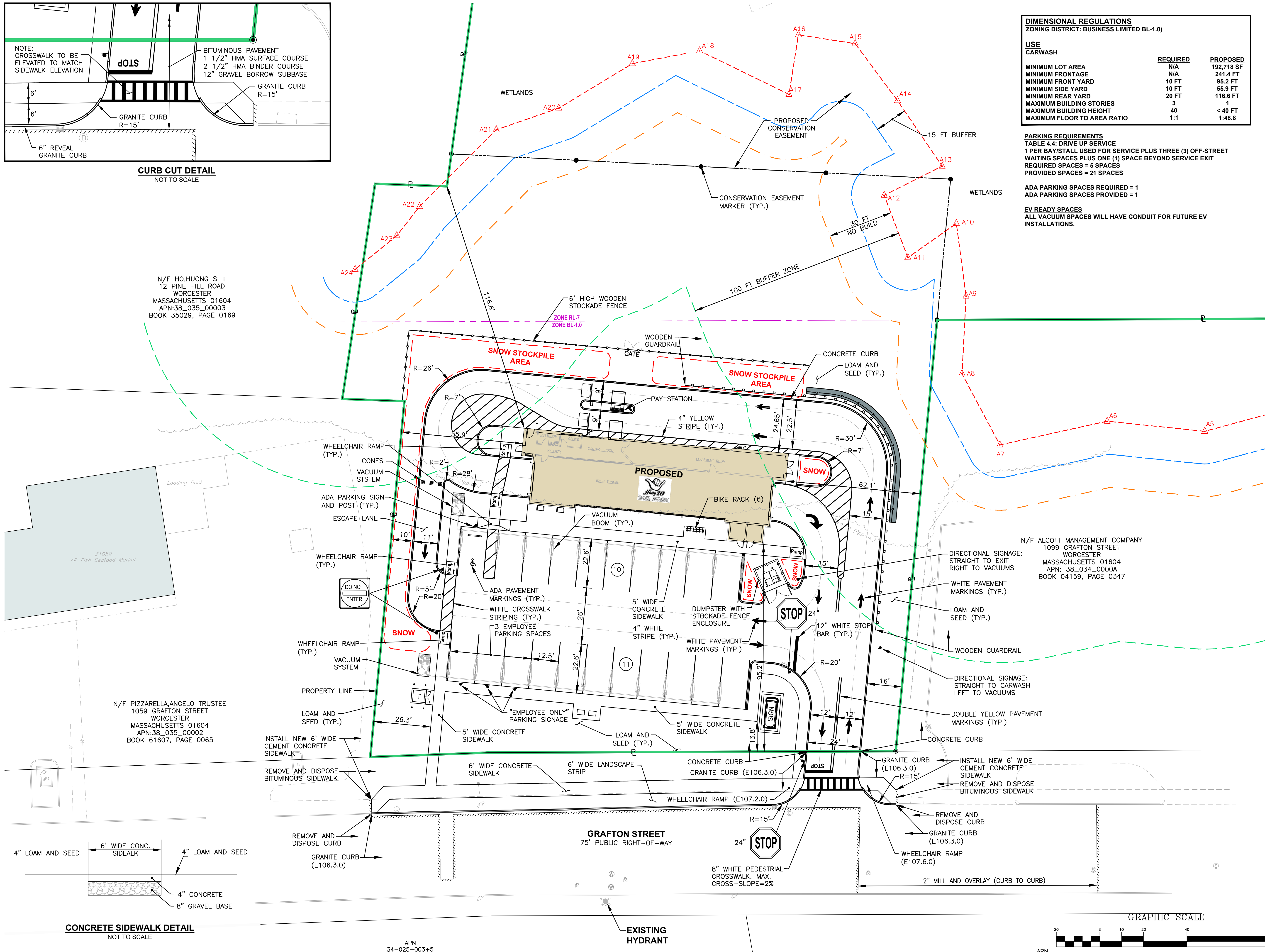
REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER

C5

SHEET: 6 OF 21

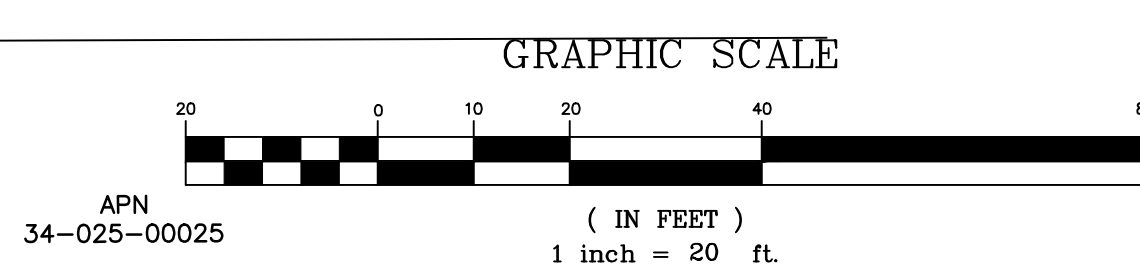


N/F HO, HUONG S +
12 PINE HILL ROAD
WORCESTER
MASSACHUSETTS 01604
APN:38_035_00003
BOOK 35029, PAGE 0169

N/F ALCOTT MANAGEMENT COMPANY
1099 GRAFTON STREET
WORCESTER
MASSACHUSETTS 01604
APN: 38_034_0000A
BOOK 04159, PAGE 0347

N/F PIZZARELLA ANGELO TRUSTEE
1059 GRAFTON STREET
WORCESTER
MASSACHUSETTS 01604
APN:38_035_00002
BOOK 61607, PAGE 0065

CONCRETE SIDEWALK DETAIL
NOT TO SCALE



APN 34-025-003+5

GRAFTON STREET
75' PUBLIC RIGHT-OF-WAY

EXISTING HYDRANT



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DRAINAGE STRUCTURE TABLE

NUMBER	STRUCTURE	FRAME AND GRATE/COVER	RIM	INVERT (IN)	INVERT (OUT)
CB 1	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	456.10	--	453.00(8")
CB 2	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	455.75	--	452.60(8")
CB 3	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	455.05	452.00(8")	451.90(8")
CB 4	PRECAST CONCRETE 12" WIDE TRENCH DRAIN	RECTANGULAR FRAME AND GRATE	454.20	--	452.20(8")
CB 5	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	456.60	--	453.50(8")
CB 6	PRECAST CONCRETE (4' DIA.)	SQUARE FRAME AND GRATE (24")	456.40	--	453.30(8")
DMH 1	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	456.05	451.70(8")(NW) 452.50(8")(SW) 451.40(8")(SE)	451.40(18")(NE)
DMH 2	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	456.80	452.85(8")(N) 453.10(8")(S)	452.35(18")
DMH 3	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	456.60	451.20(18")(SW) 451.20(18")(NE)	449.90(12")(SE) 451.20(24")(NW)
DMH 4	STORMCEPTOR STC-900	CONTECH ROUND FRAME AND COVER	456.55	449.78(12")	449.70(12")
DMH 5	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	456.90	449.50(24")	449.50(12")
DMH 6	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	457.05	449.00(24")	447.00(12")
DMH 7	PRECAST CONCRETE (4' DIA.)	24" DIA. ROUND FRAME AND COVER	457.00	453.50(12")	450.50(12")

DRAINAGE STRUCTURE NOTE:

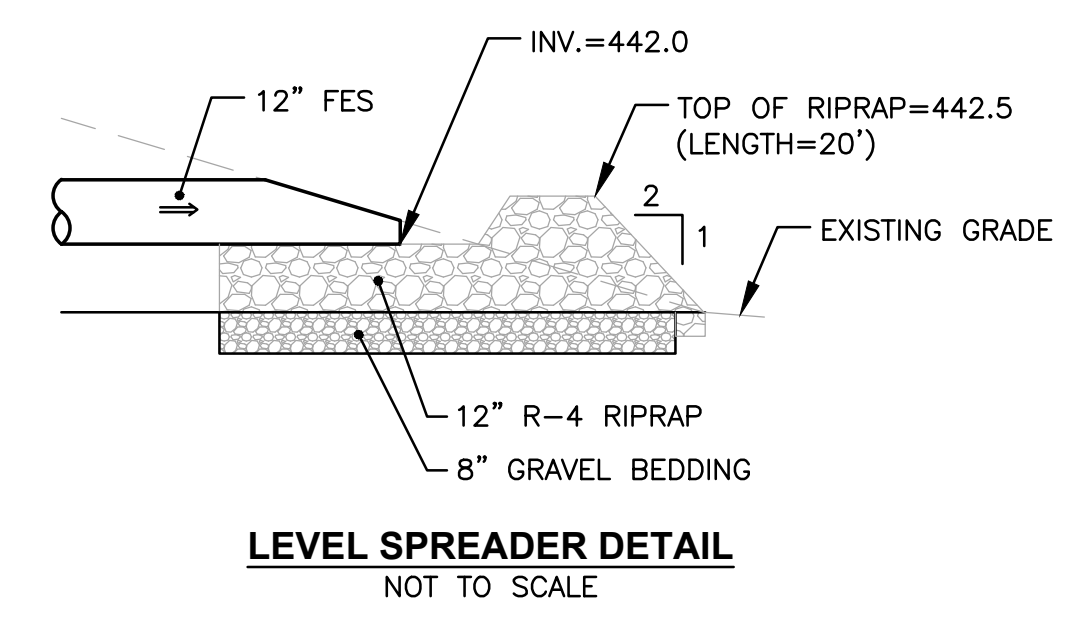
DMH 5 AND DMH 6 ARE OUTLET CONTROL STRUCTURES WITH WEIR WALLS. REFER TO DETAIL FOR ORIFICE DIMENSIONS AND ELEVATIONS IN WEIR WALLS.

DRAINAGE NOTES

- "DRAIN PIPES, OTHER THAN DETENTION SYSTEM, SHALL BE PVC DR-18.
- CATCH BASINS, MANHOLES, FRAME, GRATES AND COVERS MUST BE CITY OR WORCESTER DPW STANDARDS, DATED MARCH 1, 2023.
- ALL FLARED ENDS SHALL BE CONCRETE CITY OF WORCESTER DPW STANDARDS AND ATTACHED WITH THE PVC DRAINS WITH A FERNCO STANDARD FLEXIBLE COUPLING.

SLOPE TREATMENT

- REFER TO PLAN SHEET C8 FOR PERMANENT EROSION CONTROL BLANKET WHICH WILL BE USED ON ALL SLOPES 3:1 OR STEEPER.



N/F HO, HUONG S + 12 PINE HILL ROAD WORCESTER MASSACHUSETTS 01604 APN: 38_035_00003 BOOK 35029, PAGE 0169

UNDERGROUND DETENTION SYSTEM (UDS) 5 ROWS x 5 (20 LF) CHAMBERS PER ROW OF 48" ADS N-12 SOLID PIPE WITH HEADERS AT EACH END. CHAMBER INV.=449.50 REFER TO DETAIL.

N/F PIZZARELLA ANGELO TRUSTEE 1059 GRAFTON STREET WORCESTER MASSACHUSETTS 01604 APN: 38_035_00002 BOOK 61607, PAGE 0065

GRAFTON STREET 75' PUBLIC RIGHT-OF-WAY

EXISTING HYDRANT

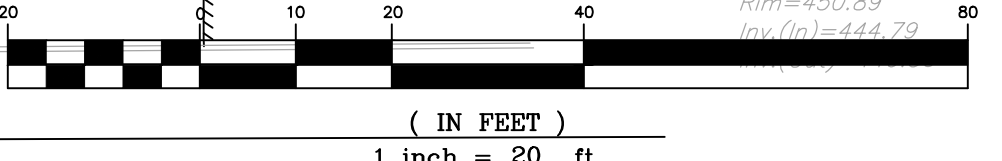
1099 GRAFTON STREET WORCESTER MASSACHUSETTS 01604 APN: 38_034_00004 BOOK 04159, PAGE 0347

MODULAR BLOCK RETAINING WALL WITH PEDESTRIAN FENCE (DESIGN BY OTHERS). HEIGHT VARIES.

REMOVE AND DISPOSE EXISTING FRAME AND COVER. INSTALL NEW HEAVY DUTY FRAME AND COVER

UNDERGROUND INFILTRATION SYSTEM (UIS) 4 ROWS x 15 CHAMBERS PER ROW OF CULTEC R-360HD CHAMBERS. CHAMBER INV.=449.00 BOTTOM STONE INV.=448.50 REFER TO DETAIL.

GRAPHIC SCALE



KEY PLAN

PROJECT TITLE:

PROPOSED CAR WASH
 PLAT MAP 38,
 BLOCK 35 LOT 2
 ZONING DISTRICTS: BL-1.0 and RL-7
 BUSINESS LIMITED and
 SINGLE FAMILY DISTRICT
 1059 GRAFTON STREET
 WORCESTER, MA

PREPARED FOR:

1059 GRAFTON STREET, LLC
 C/O BASS, DOHERTY & FINKS, P.C.
 1380 SOLDIERS FIELD ROAD
 BOSTON, MA 02135-1023

DRAWING TITLE:

GRADING and DRAINAGE PLAN

DATE: JUNE 2023 SCALE: 1"=20'

DWG. NAME: M280-C06-GRAD-R3.dwg

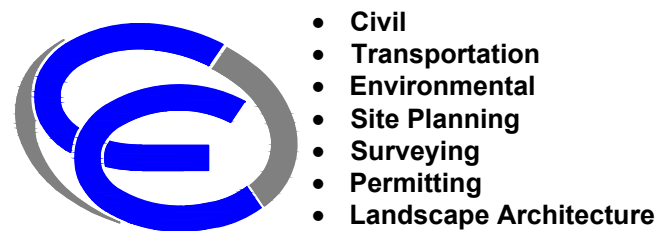
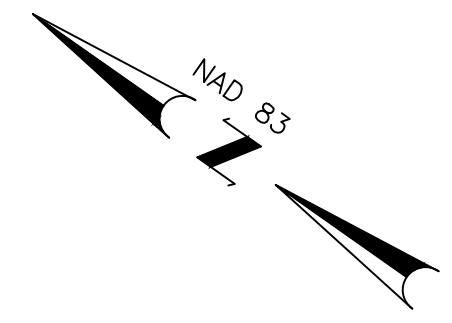
REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER

C6

SHEET: 7 OF 21



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KEY PLAN

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 PLAT MAP 38,
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 ZONING DISTRICTS: BL-1.0 and RL-7
 BUSINESS LIMITED and
 SINGLE FAMILY DISTRICT
 1059 GRAFTON STREET
 WORCESTER, MA

PREPARED FOR:
 1059 GRAFTON STREET, LLC
 C/O BASS, DOHERTY & FINKS, P.C.
 1380 SOLDIERS FIELD ROAD
 BOSTON, MA 02135-1023

DRAWING TITLE:
UTILITY PLAN

DATE: JUNE 2023 **SCALE:** 1"=20'
DWC. NAME: M280-C07-UTILITY-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C7
 SHEET: 8 OF 21

UTILITY NOTES

- CONTRACTOR SHALL COORDINATE NEW ELECTRIC AND COMMUNICATION SERVICE WITH UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF NEW CONDUITS, WIRES AND TRANSFORMERS AS REQUIRED TO SERVICE THIS SITE.
 - CONTRACTOR IS REQUIRED TO DIG TEST PITS AT ALL PROPOSED-EXISTING UTILITY TIE-IN AREAS. THIS WORK SHALL BE CONDUCTED PRIOR TO INSTALLATION. COORDINATION WITH OWNER AND ENGINEER IS REQUIRED.
 - ALL UTILITIES PENETRATING THE FOUNDATION WALL SHALL BE SLEEVED WITH WATER TIGHT FITTINGS.
 - THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE ARCHITECT AND PLUMBING ENGINEER TO CONFIRM THE WATER SERVICE SIZE AND SERVICE PRESSURES. THE CONTRACTOR SHALL COORDINATE WITH THE PLUMBING ENGINEER TO CONDUCT A FIRE FLOW TEST PRIOR TO CONSTRUCTION.
 - GAS LINE SIZE SHALL BE VERIFIED BY THE ARCHITECT PRIOR TO CONSTRUCTION.
 - UTILITY SERVICE LOCATIONS AT THE BUILDING AS SHOWN ON THIS PLAN MAY VARY DEPENDING ON FINAL ARCHITECTURAL DESIGN.
 - PROPOSED SEWER SERVICE SHALL BE 6" SDR 35 OR APPROVED EQUAL. PROPOSED SEWER MAIN SHALL BE 8" SDR 35 OR APPROVED EQUAL.
 - 21 ELECTRIC VEHICLE READY PARKING SPACES PROVIDED.
- * OIL/WATER SEPARATOR MUST CONFORM TO CITY OF WORCESTER STANDARD GREASE TRAP.

EASEMENT NOTE:

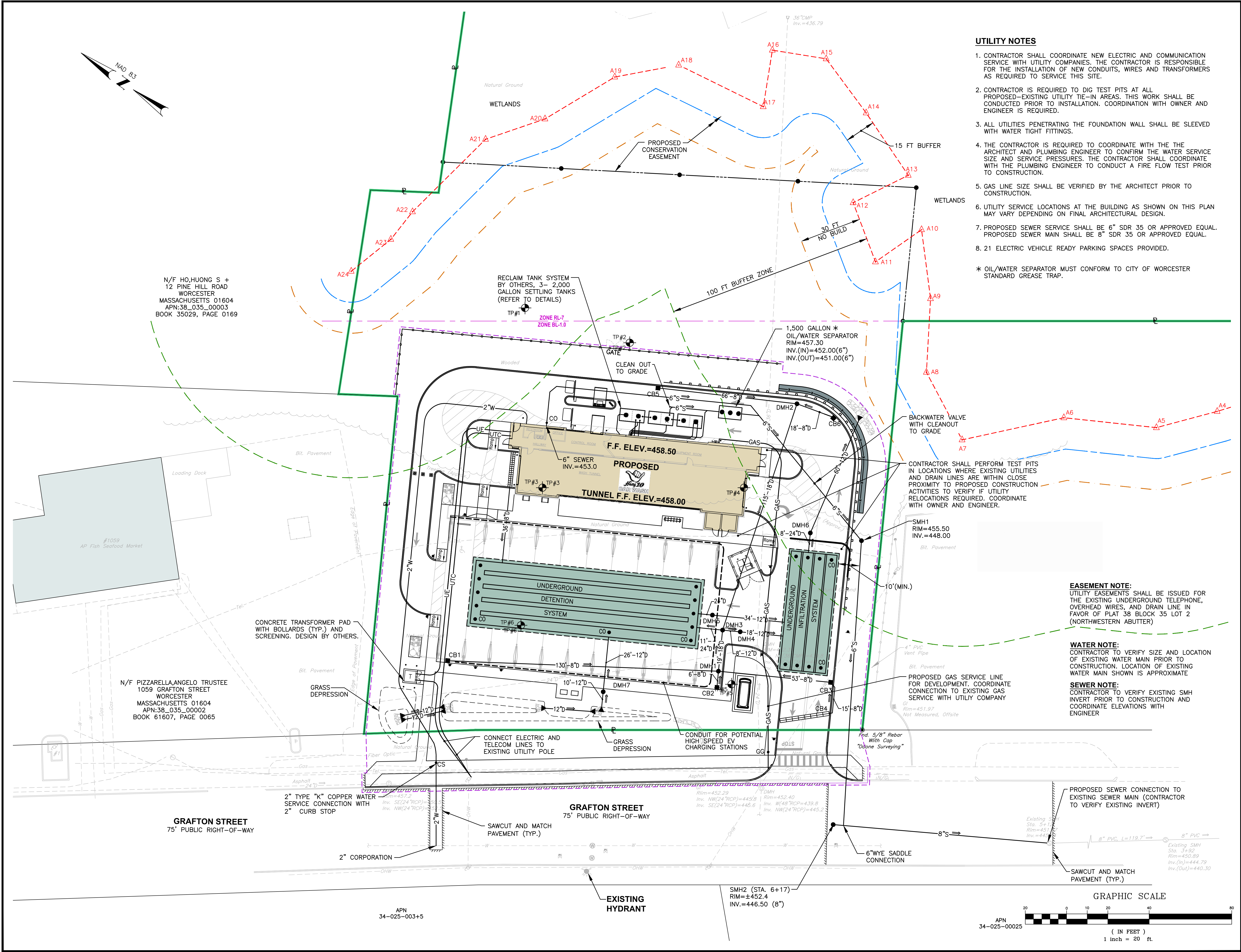
UTILITY EASEMENTS SHALL BE ISSUED FOR THE EXISTING UNDERGROUND TELEPHONE, OVERHEAD WIRES, AND DRAIN LINE IN FAVOR OF PLAT 38 BLOCK 35 LOT 2 (NORTHWESTERN ABUTTER)

WATER NOTE:

CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING WATER MAIN PRIOR TO CONSTRUCTION. LOCATION OF EXISTING WATER MAIN SHOWN IS APPROXIMATE

SEWER NOTE:

CONTRACTOR TO VERIFY EXISTING SMH INVERT PRIOR TO CONSTRUCTION AND COORDINATE ELEVATIONS WITH ENGINEER



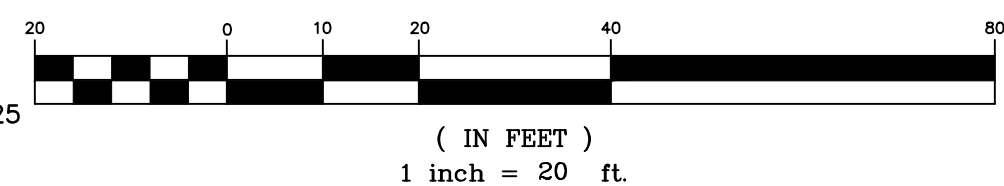
N/F HO, HUONG S +
 12 PINE HILL ROAD
 WORCESTER
 MASSACHUSETTS 01604
 APN: 38_035_00003
 BOOK 35029, PAGE 0169

N/F PIZZARELLA, ANGELO TRUSTEE
 1059 GRAFTON STREET
 WORCESTER
 MASSACHUSETTS 01604
 APN: 38_035_00002
 BOOK 61607, PAGE 0065

GRAFTON STREET
 75' PUBLIC RIGHT-OF-WAY

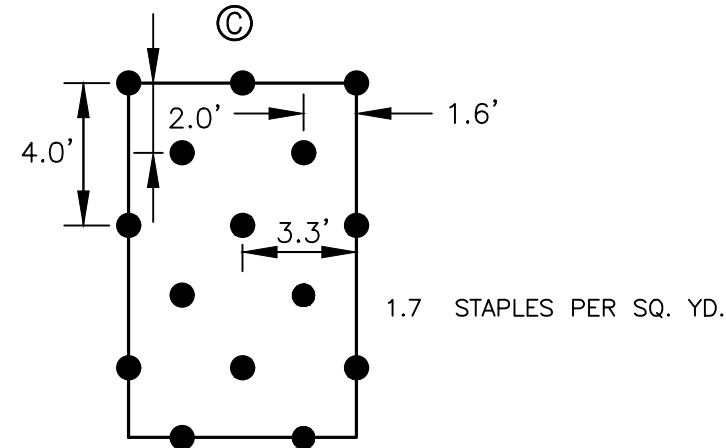
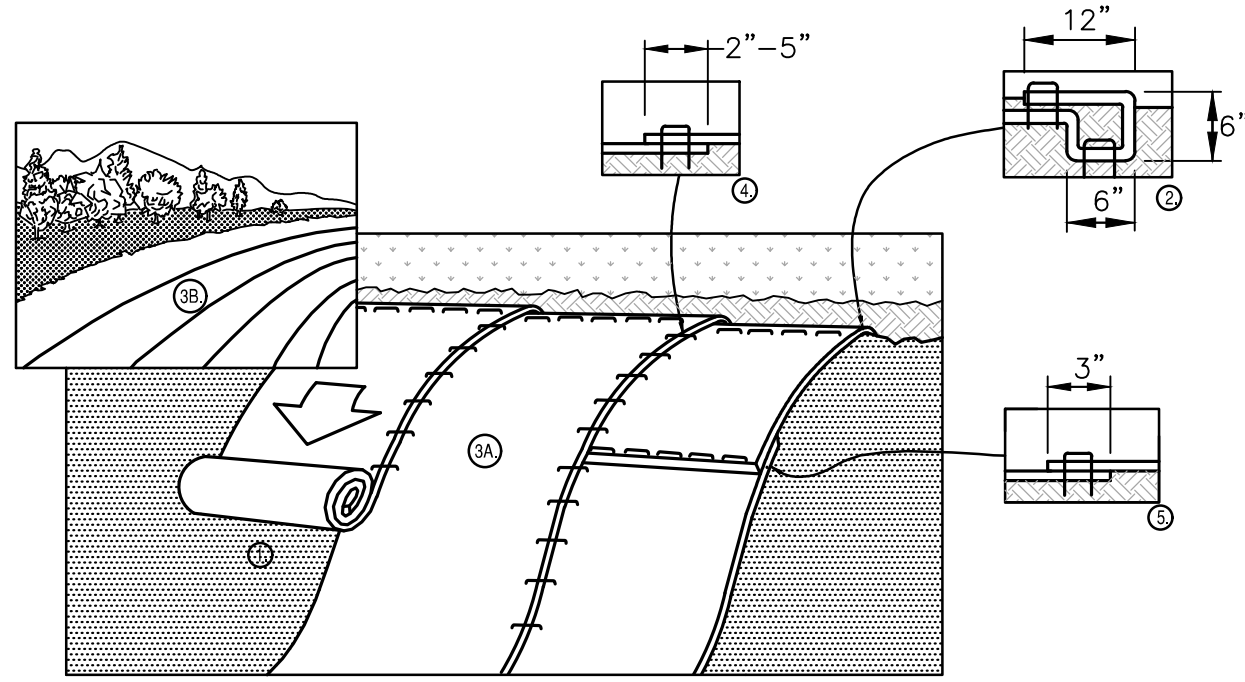
GRAFTON STREET
 75' PUBLIC RIGHT-OF-WAY

GRAPHIC SCALE



APN
 34-025-003+5

APN
 34-025-00025



NOTES:

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 SPICED 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**

INSPECTION/MAINTENANCE NOTES

1. PRIOR TO COMMENCING CLEARING AND GRUBBING OPERATIONS, PERIMETER EROSION CONTROLS SHALL BE PLACED SO AS TO PREVENT SEDIMENT FROM ENTERING EXISTING ROADWAY DRAINAGE SYSTEM, WETLANDS AND ADJUTING PROPERTIES.
2. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE ROADWAY DRAINAGE SYSTEM.
3. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION 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 EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER OR TOWN'S REPRESENTATIVE.
7. THE LATEST VERSION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS HANDBOOK" PREPARED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION 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 SURFACES TO ENSURE A STABLE PRODUCT.

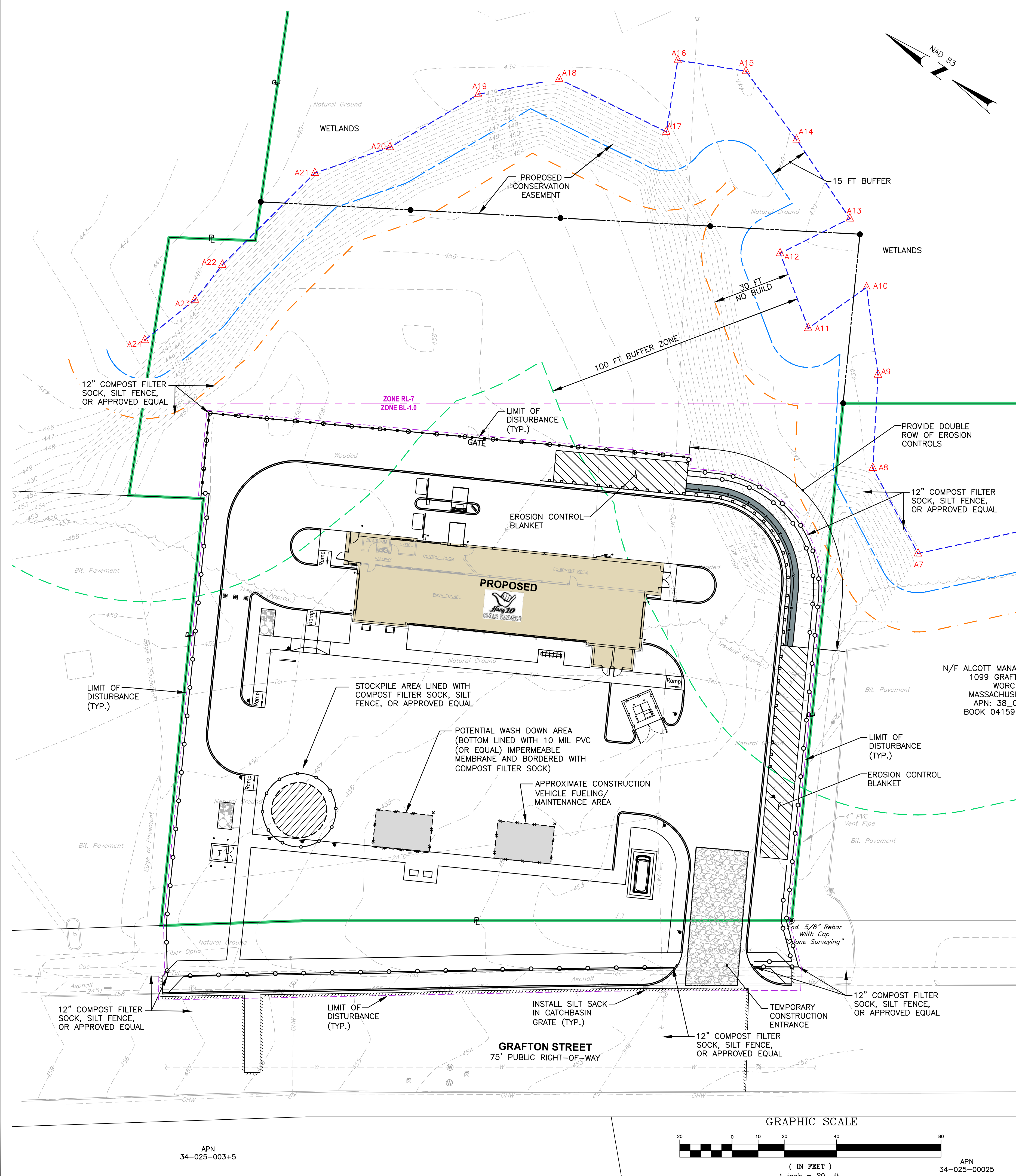
DUST CONTROL NOTES

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE TOWN, 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 FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.

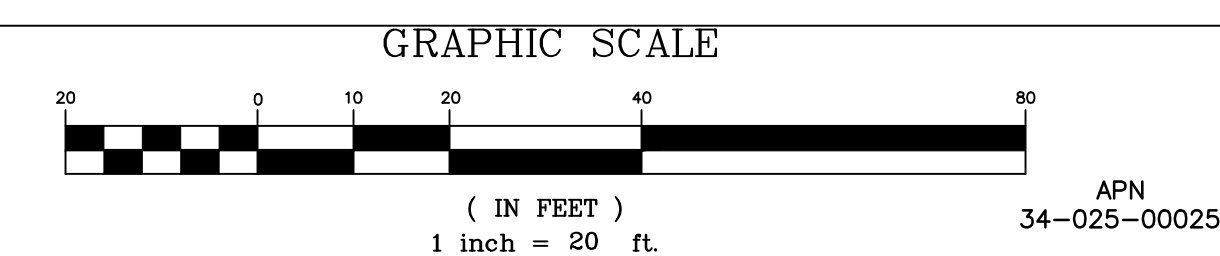
GENERAL PROJECT WIDE NOTES

1. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS SHALL BE FITTED WITH SILT SACKS OR APPROVED EQUAL.
2. 12" COMPOST FILTER SOCK, SILT FENCE, OR APPROVED EQUAL SHALL BE INSTALLED AT THE LOCATIONS SHOWN. ADDITIONAL SILT FENCE OR EROSION CONTROLS SHALL BE INSTALLED WHERE NEEDED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
3. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
4. ALL SOIL EROSION AND SEDIMENT CONTROLS SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
5. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DROPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
6. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEEDDED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
7. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED FILTER SOCK.
8. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR APPROVED EQUAL.
9. SILT FENCE OR STAKED HAYBALES MAY BE USED IN LIEU OF THE COMPOST FILTER SOCK.



N/F ALCOTT MANAGER
1099 GRAFTON
WORCESTER
MASSACHUSETTS
APN: 38_034_
BOOK 04159, P#

APN
34-025-003+5



APN
34-025-00025

Crossman Engineering
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KEY PLAN

PROJECT TITLE:
**PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA**

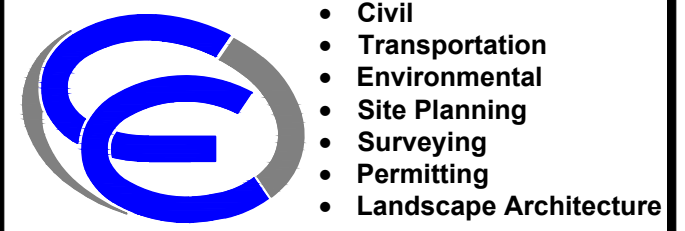
PREPARED FOR:
**1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023**

DRAWING TITLE:
**SOIL EROSION and
SEDIMENT CONTROL PLAN**

DATE: JUNE 2023 **SCALE:** 1"=20'
DWC. NAME: M280-C08-SOIL-R3.dwg

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C8
SHEET: 9 OF 21



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KEY PLAN

PROJECT TITLE:

PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:

1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

DRAWING TITLE:

**MISCELLANEOUS
DETAIL PLAN No. 1**

DATE: JUNE 2023 SCALE: AS SHOWN

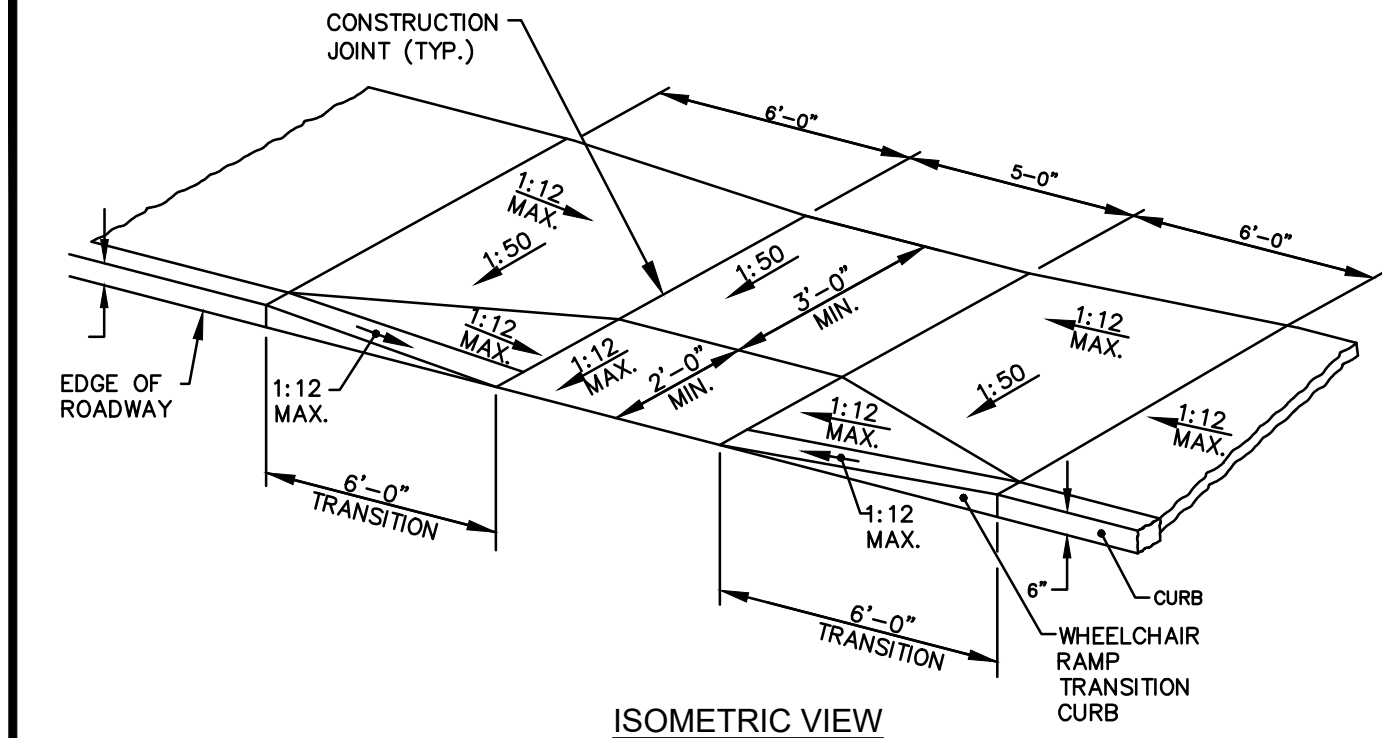
DWG. NAME: M280-C09-DETAIL1-R3.dwg

REVISIONS		
NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER

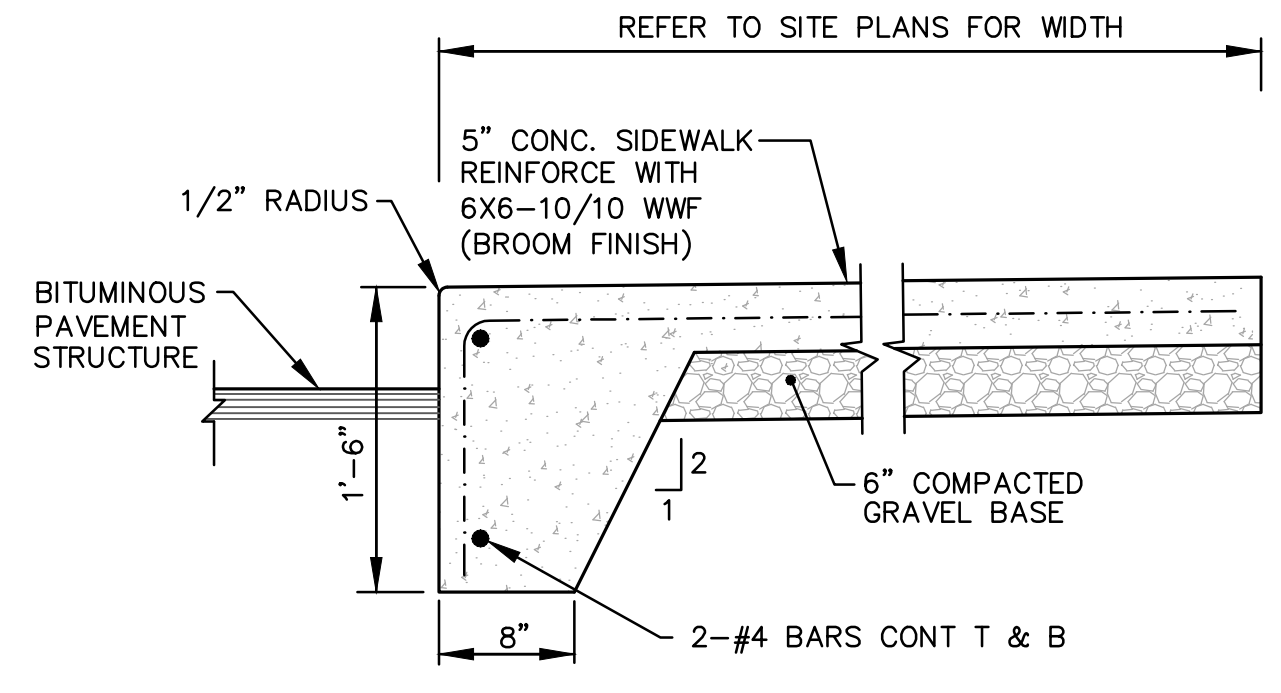
C9

SHEET: 10 OF 21

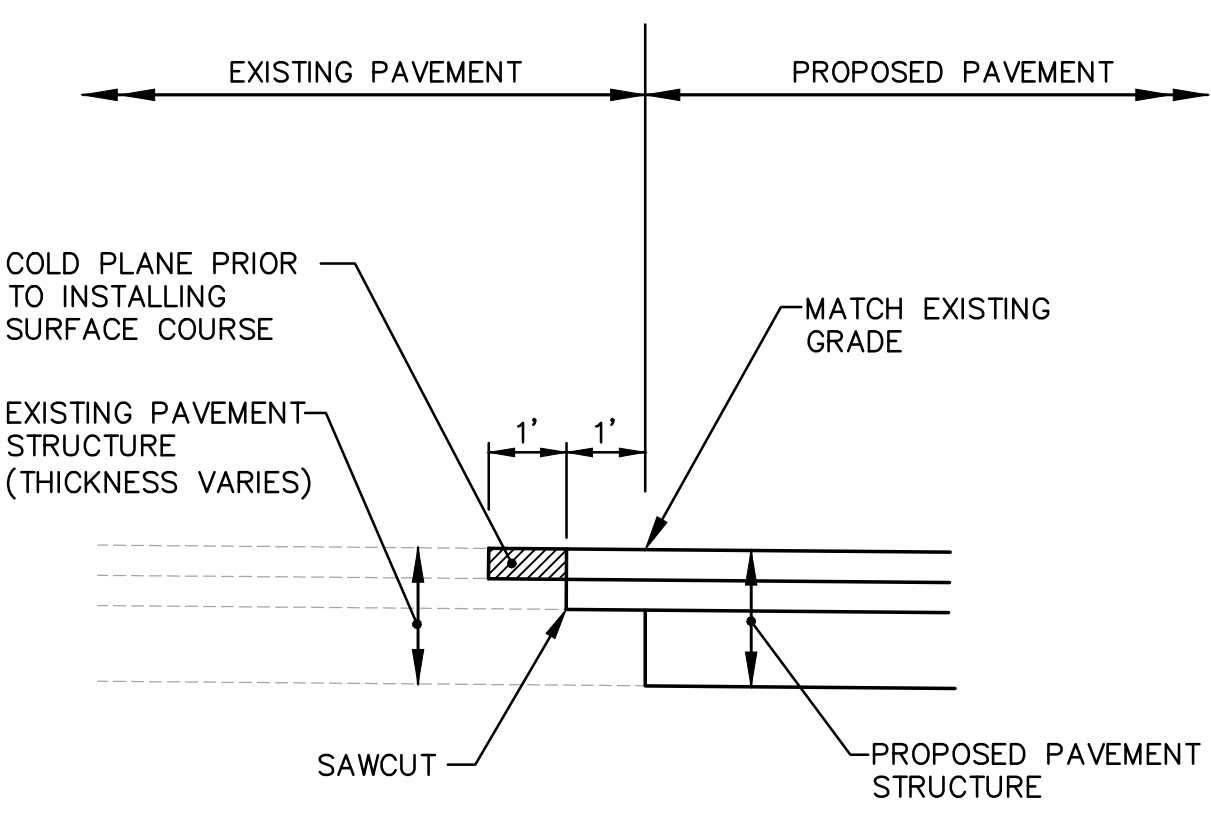


NOTE:
ALL WHEEL CHAIR RAMPS SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND ADA REQUIREMENTS.

WHEELCHAIR RAMP DETAIL
NOT TO SCALE

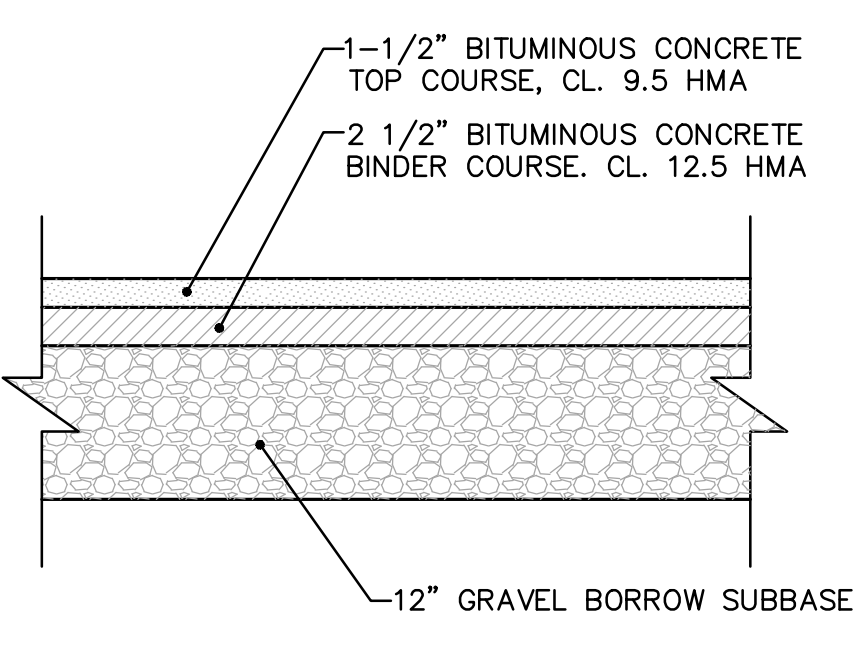


TYPICAL CONCRETE WALK WITH CAST-IN-PLACE CURB
NOT TO SCALE



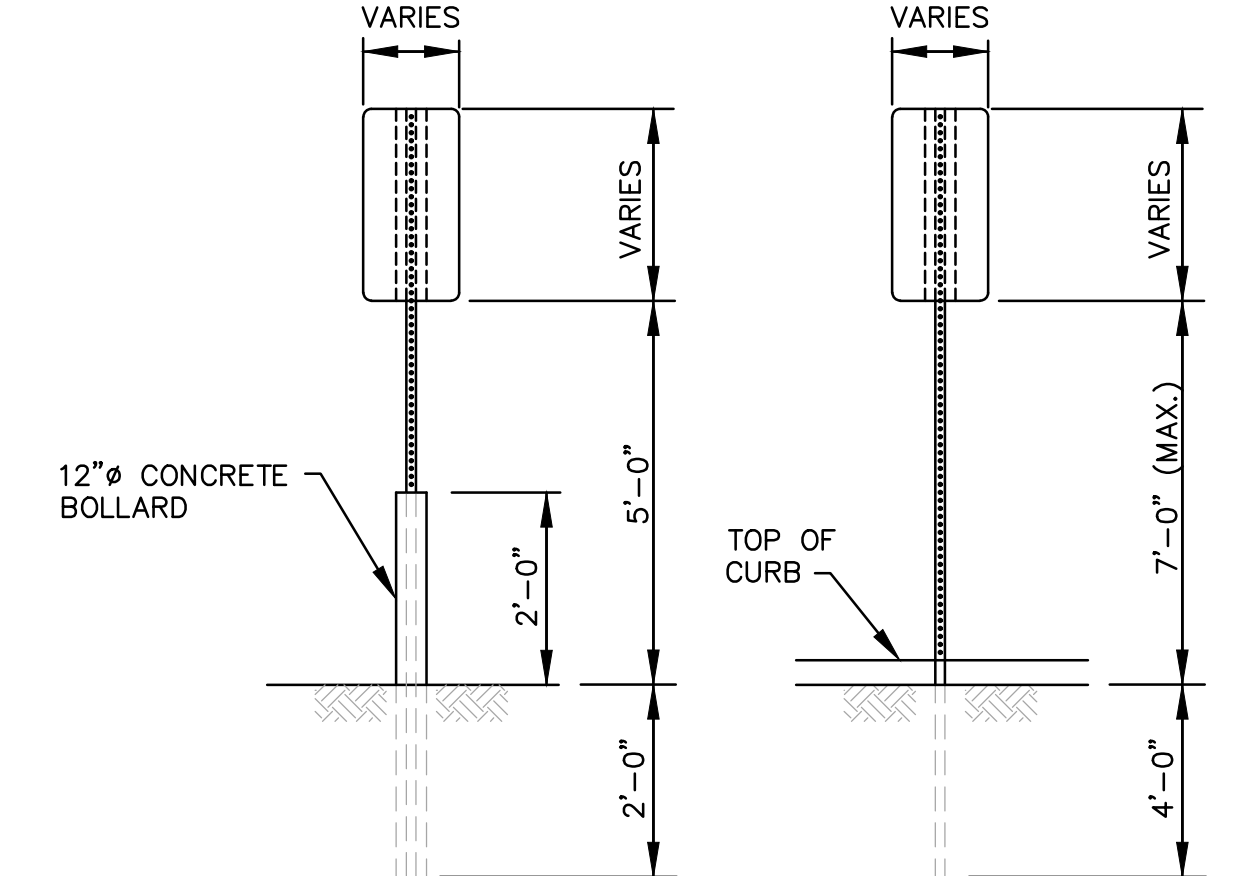
NOTE:
PROPOSED BITUMINOUS PAVEMENT SHALL BE CLASS 12.5 OR CLASS 9.5 HMA

PROPOSED PAVEMENT MATCH AT EXISTING PAVEMENT
NOT TO SCALE



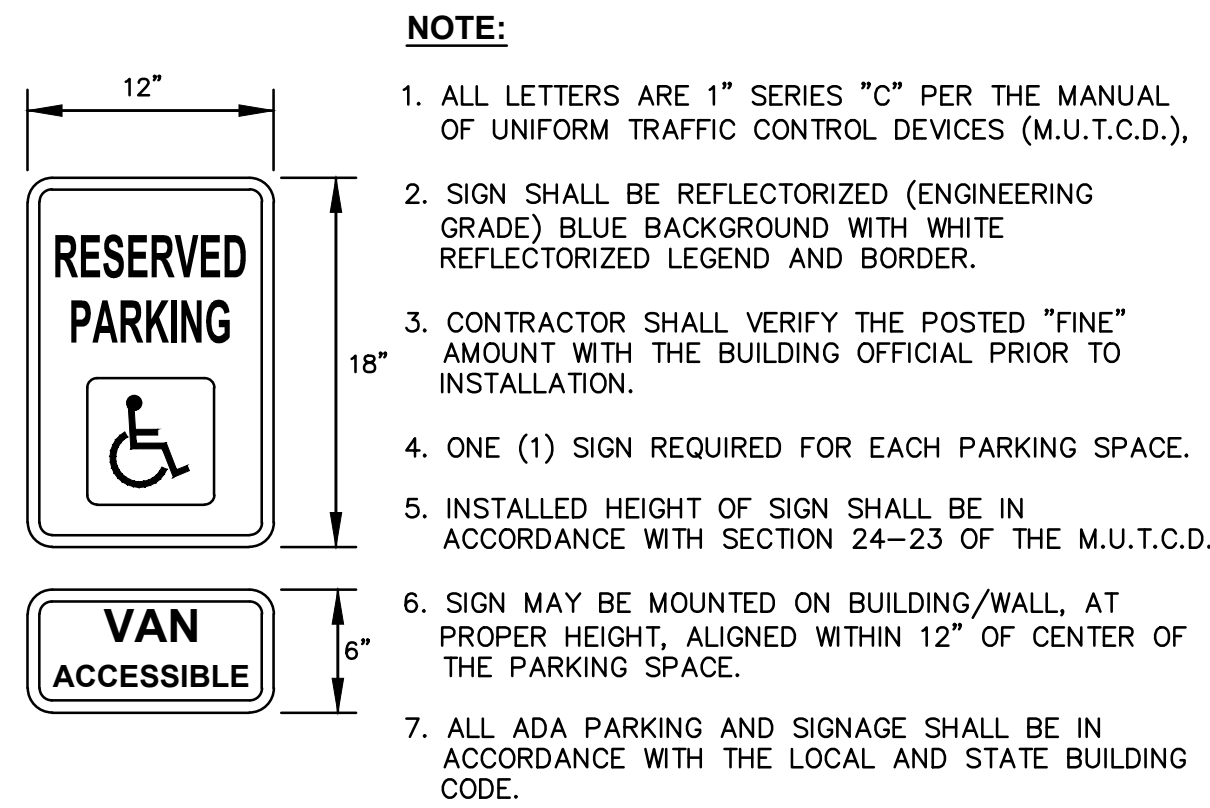
NOTE:
PROPOSED BITUMINOUS PAVEMENT SHALL BE CLASS 12.5 OR CLASS 9.5 HMA

PROPOSED PAVEMENT STRUCTURE DETAIL
NOT TO SCALE



(MOUNTING DETAIL FOR SIGNS WITH NO SIDEWALK)
(MOUNTING DETAIL FOR SIGNS BEHIND SIDEWALK)

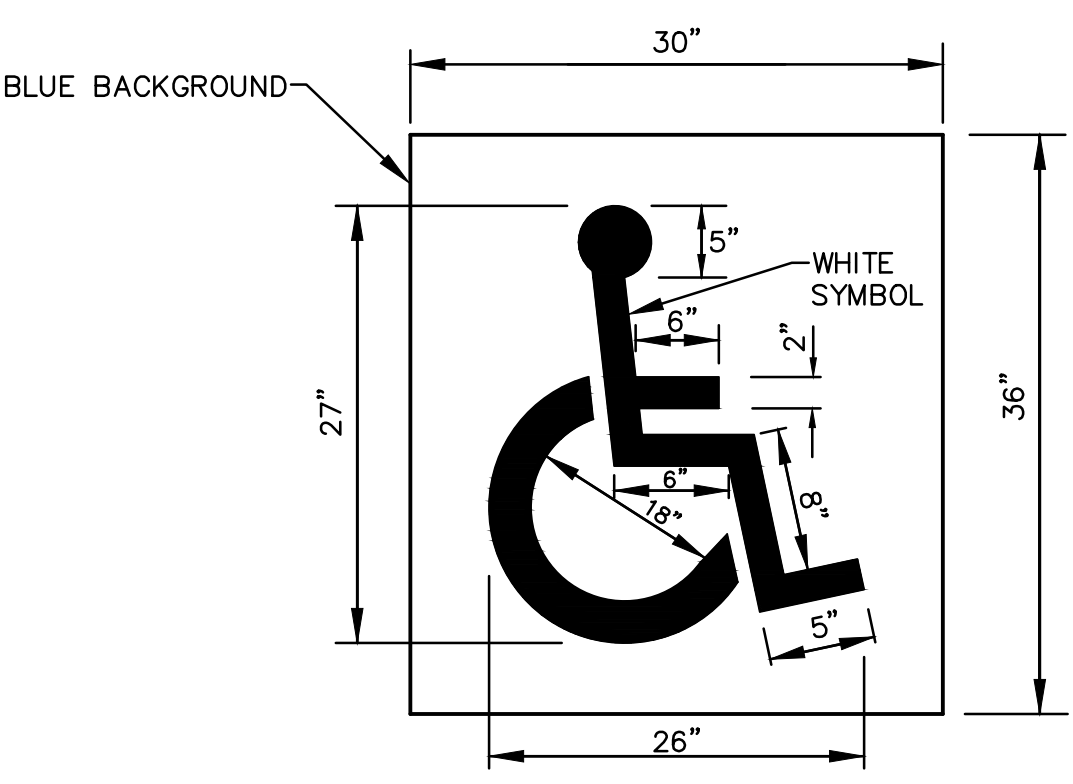
SIGN MOUNTING DETAIL
NOT TO SCALE



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 ADA PARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE.

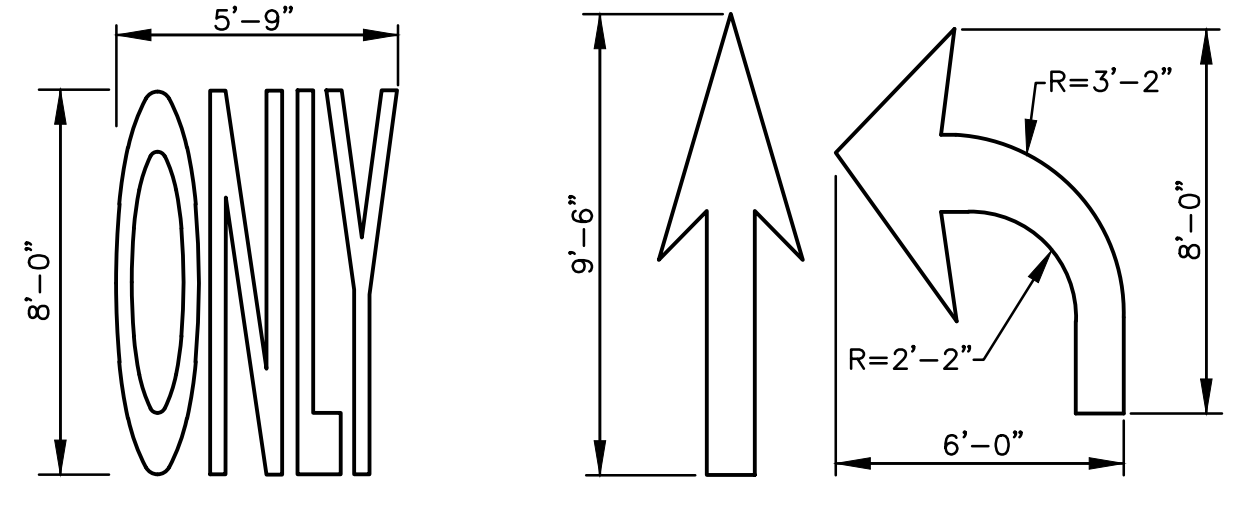
SIGN NOTES:
1. SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN.) AND INSTALLED IN CONFORMANCE WITH MUTCD AND LOCAL STANDARDS AND SPECIFICATIONS.
2. POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN.)
3. THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
4. WITHIN SIDEWALK LOCATIONS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

ADA PARKING SIGNS
NOT TO SCALE



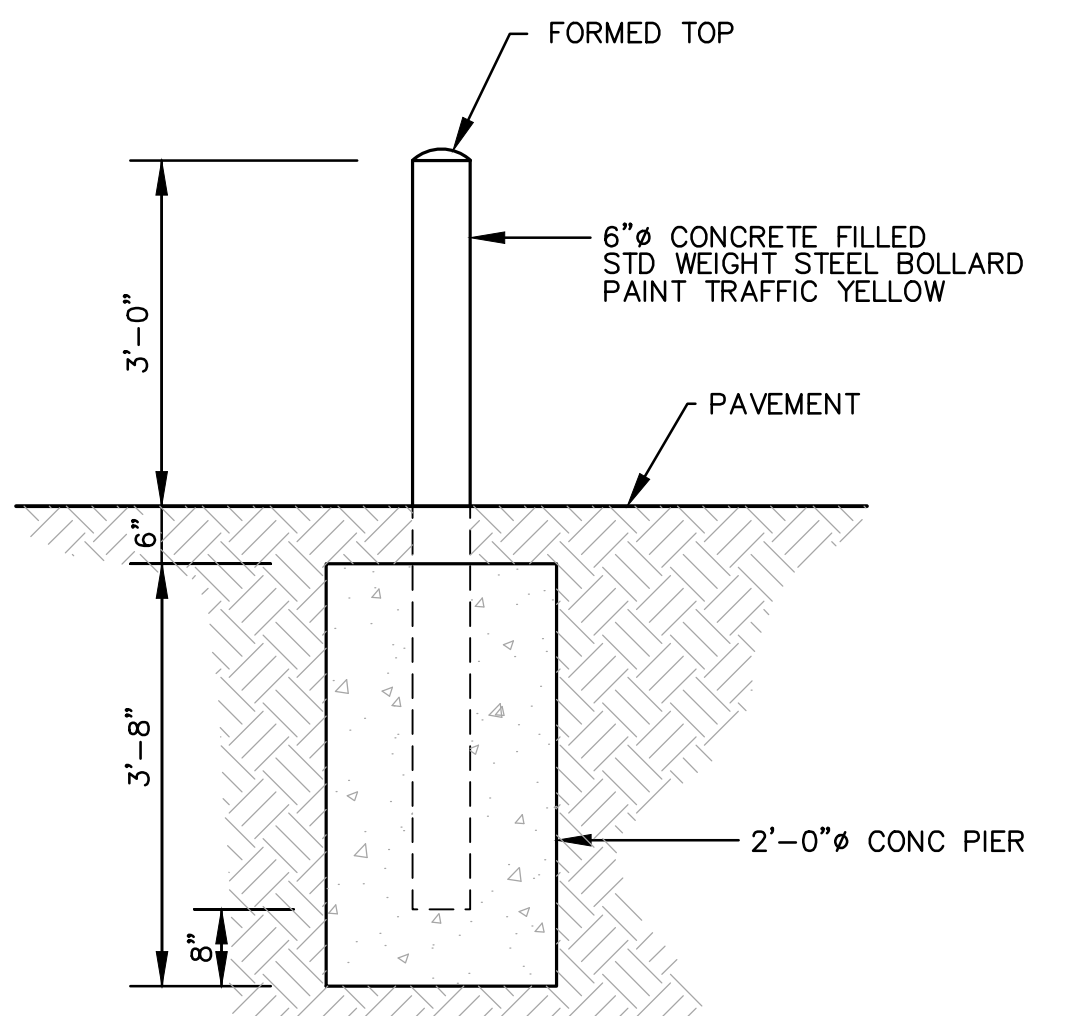
NOTE:
ALL ADA PARKING SPACES SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND ADA REQUIREMENTS.

ADA PAVEMENT MARKING
NOT TO SCALE



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."

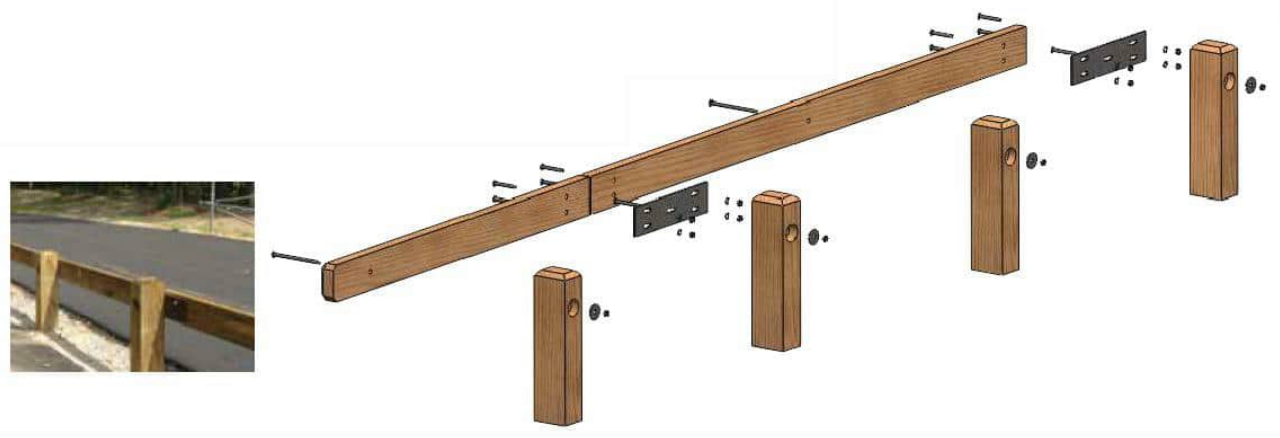
PAVEMENT MARKING DETAIL
NOT TO SCALE



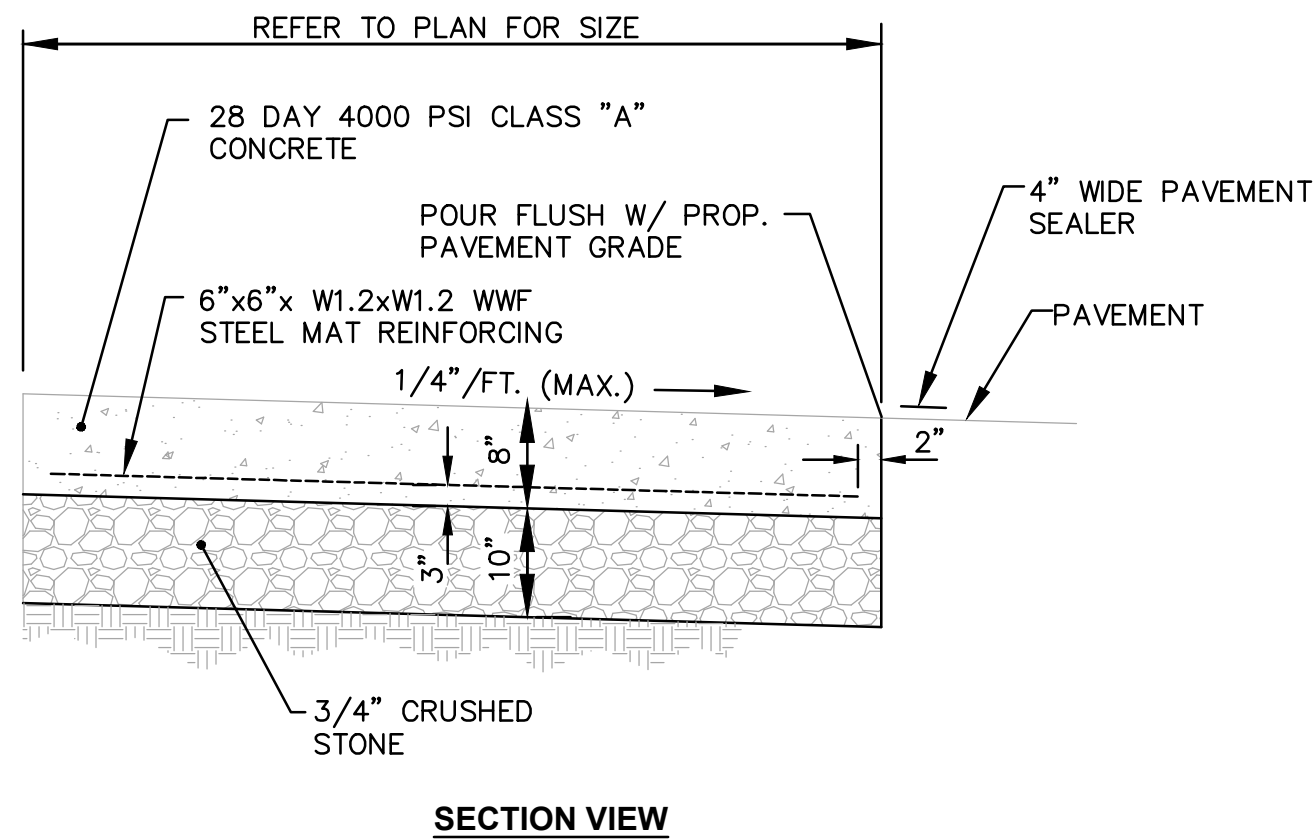
TYPICAL BOLLARD DETAIL
NOT TO SCALE



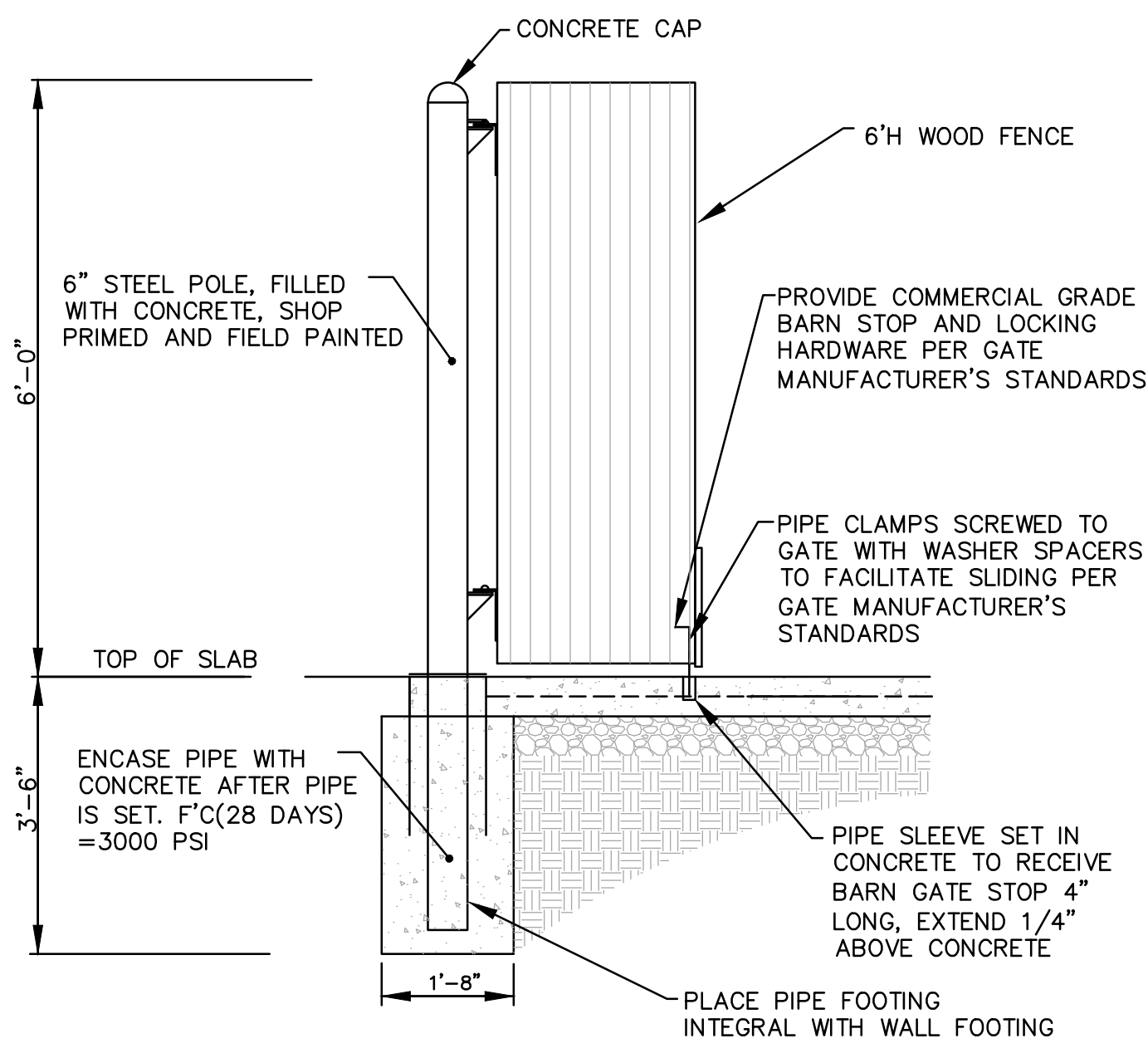
Square American Timber Rail - 6" x 8" - 6' Posts with 4" x 8" - 12' Rails



WOOD GUARDRAIL DETAIL
NOT TO SCALE



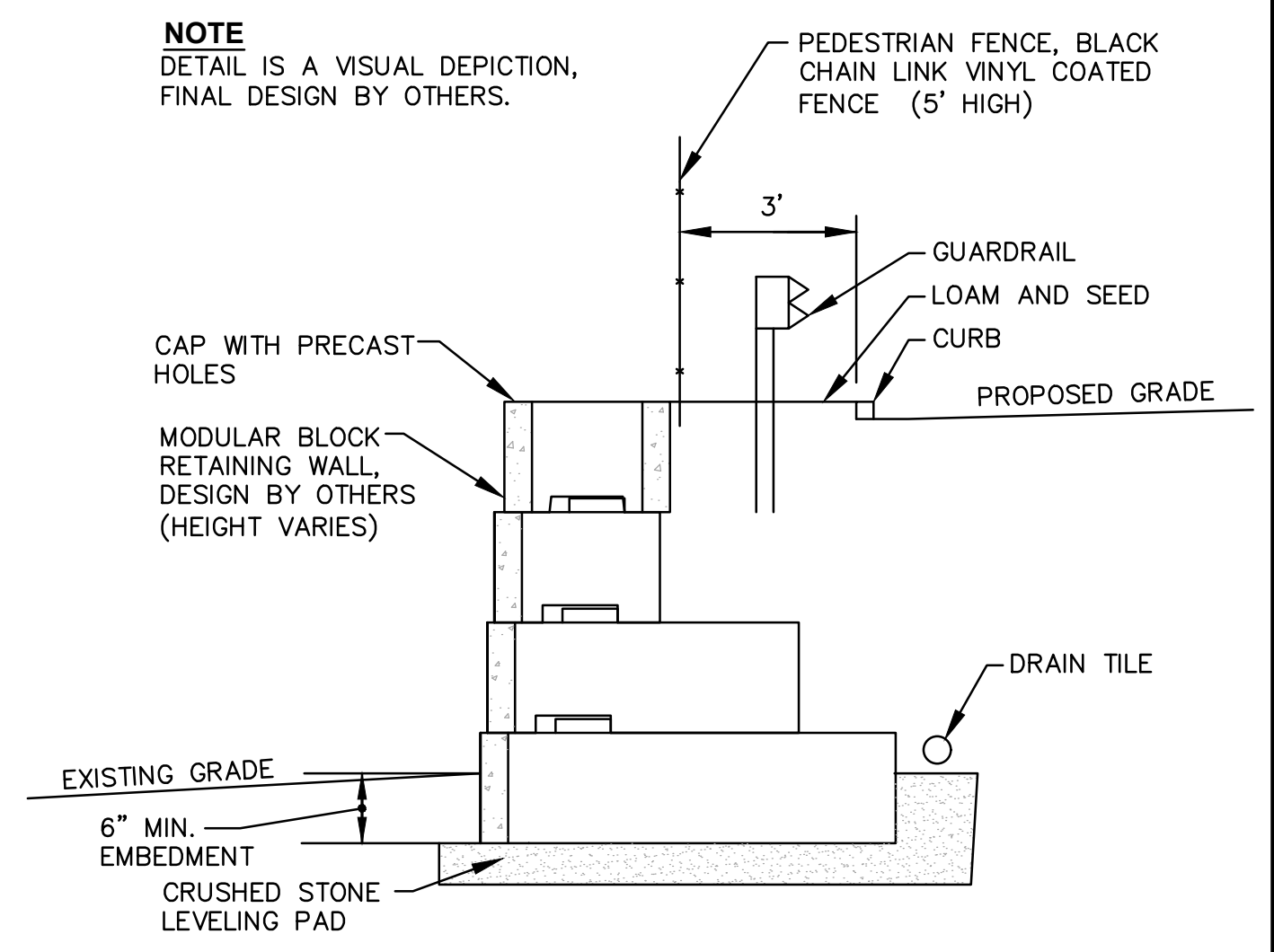
DUMPSTER ENCLOSURE PAD DETAIL
NOT TO SCALE



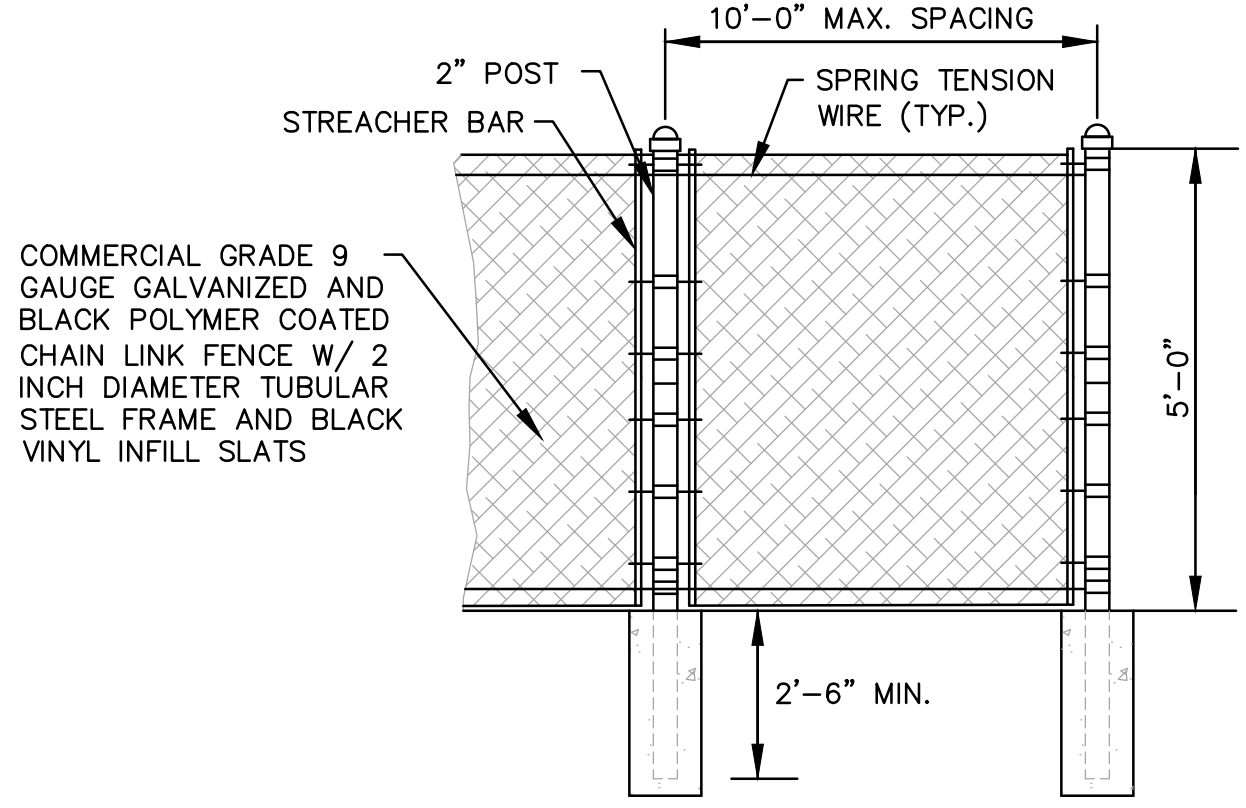
DUMPSTER ENCLOSURE GATE-PARTIAL SECTION
NOT TO SCALE



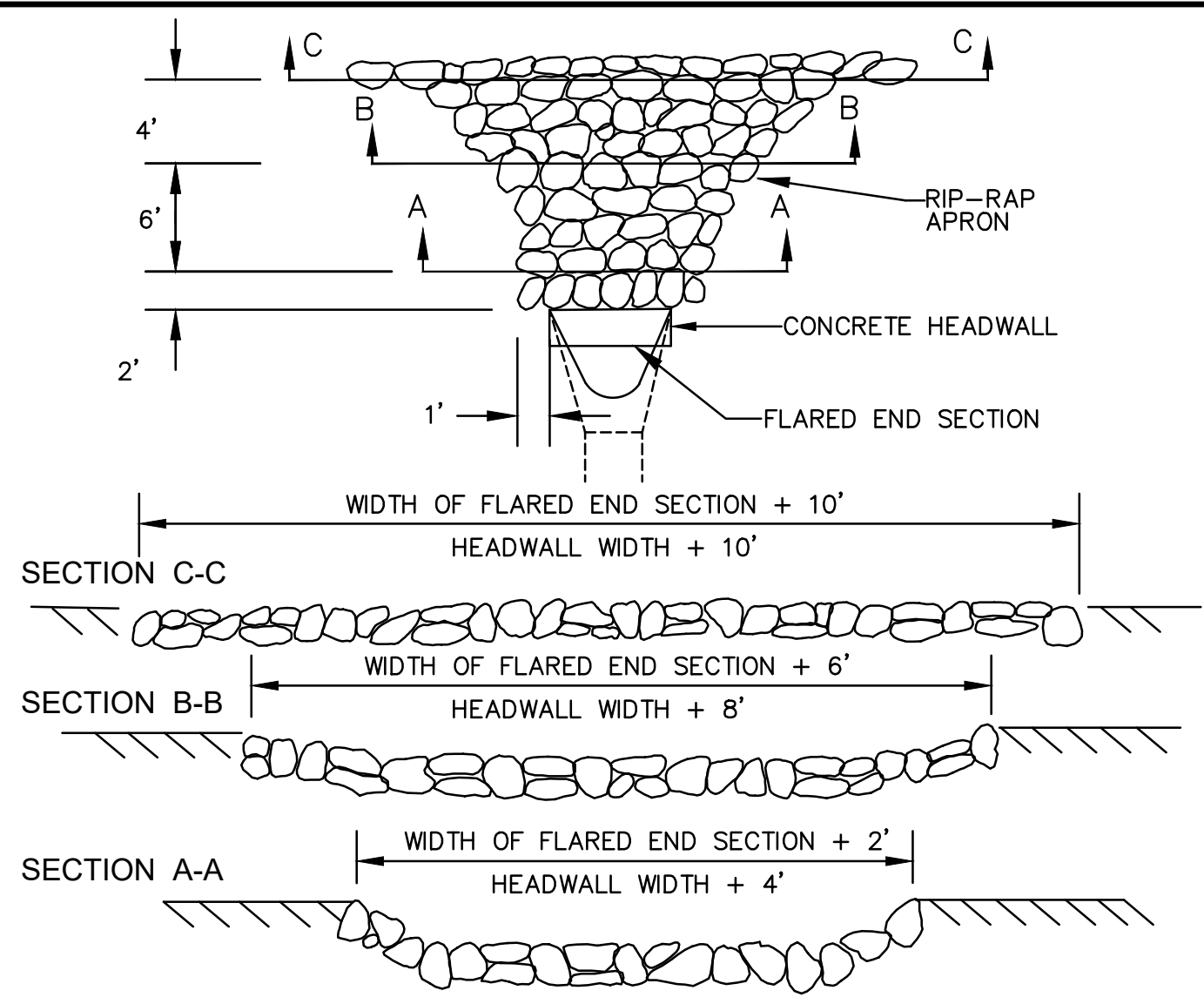
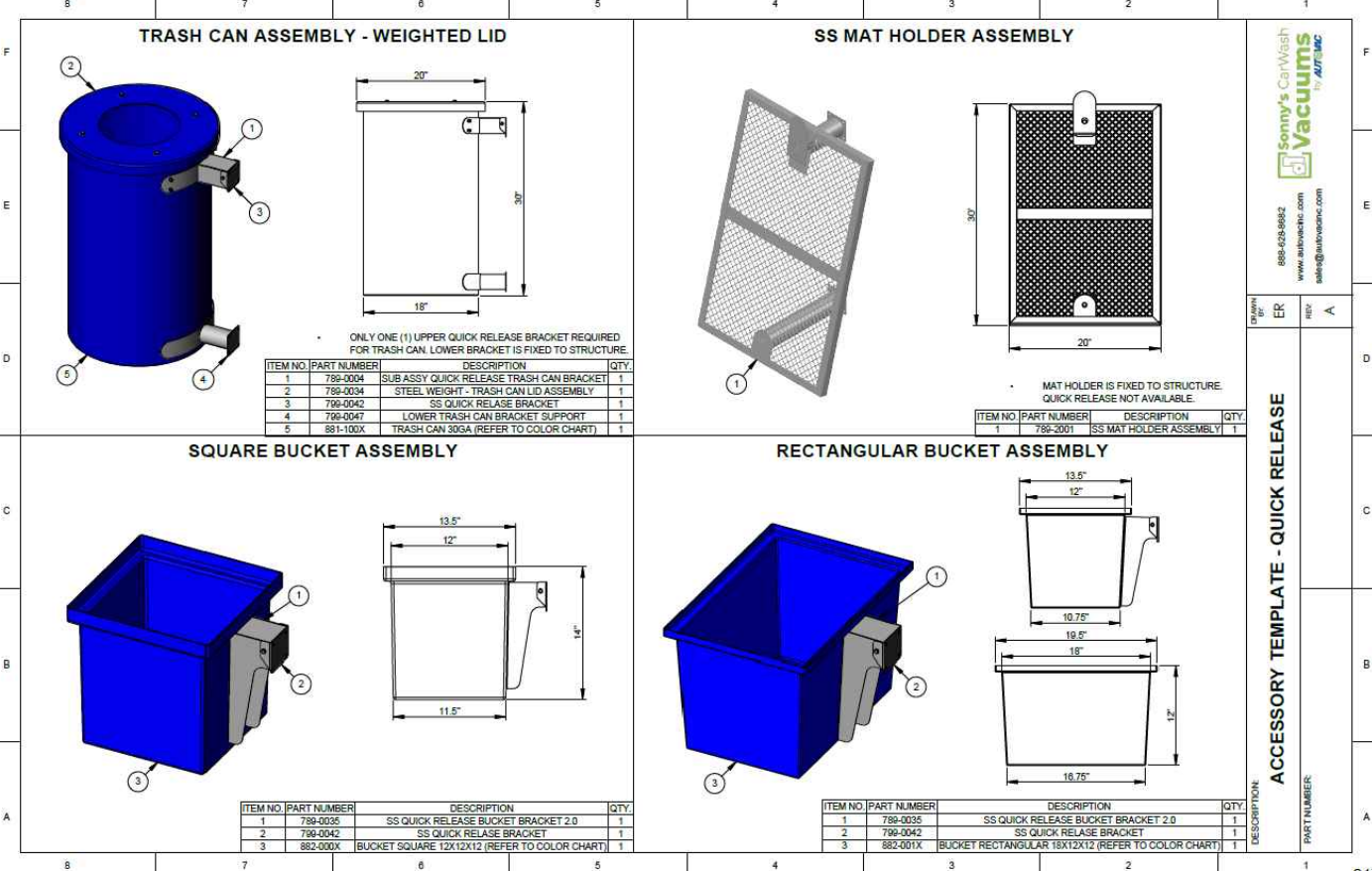
DUMPSTER ENCLOSURE TYPICAL DETAIL
NOT TO SCALE



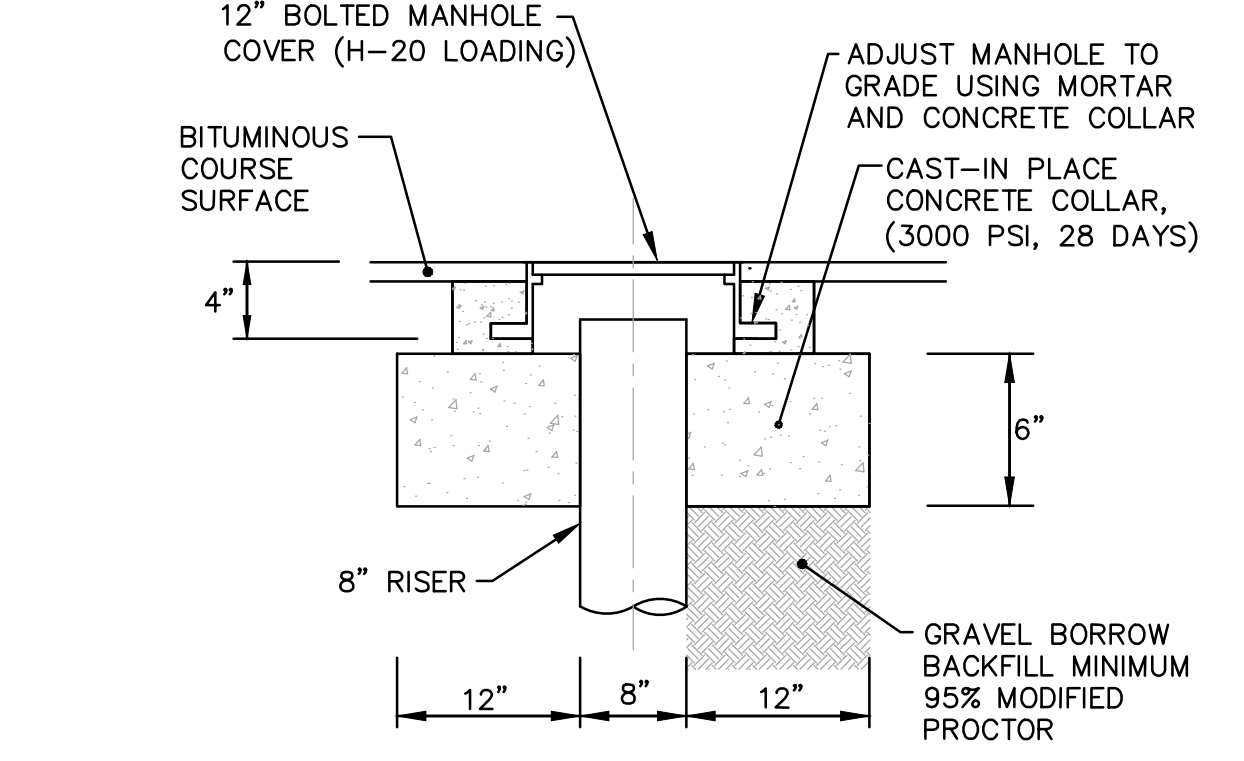
CONCEPTUAL MODULAR BLOCK RETAINING WALL DETAIL
(DESIGN BY OTHERS)
NOT TO SCALE



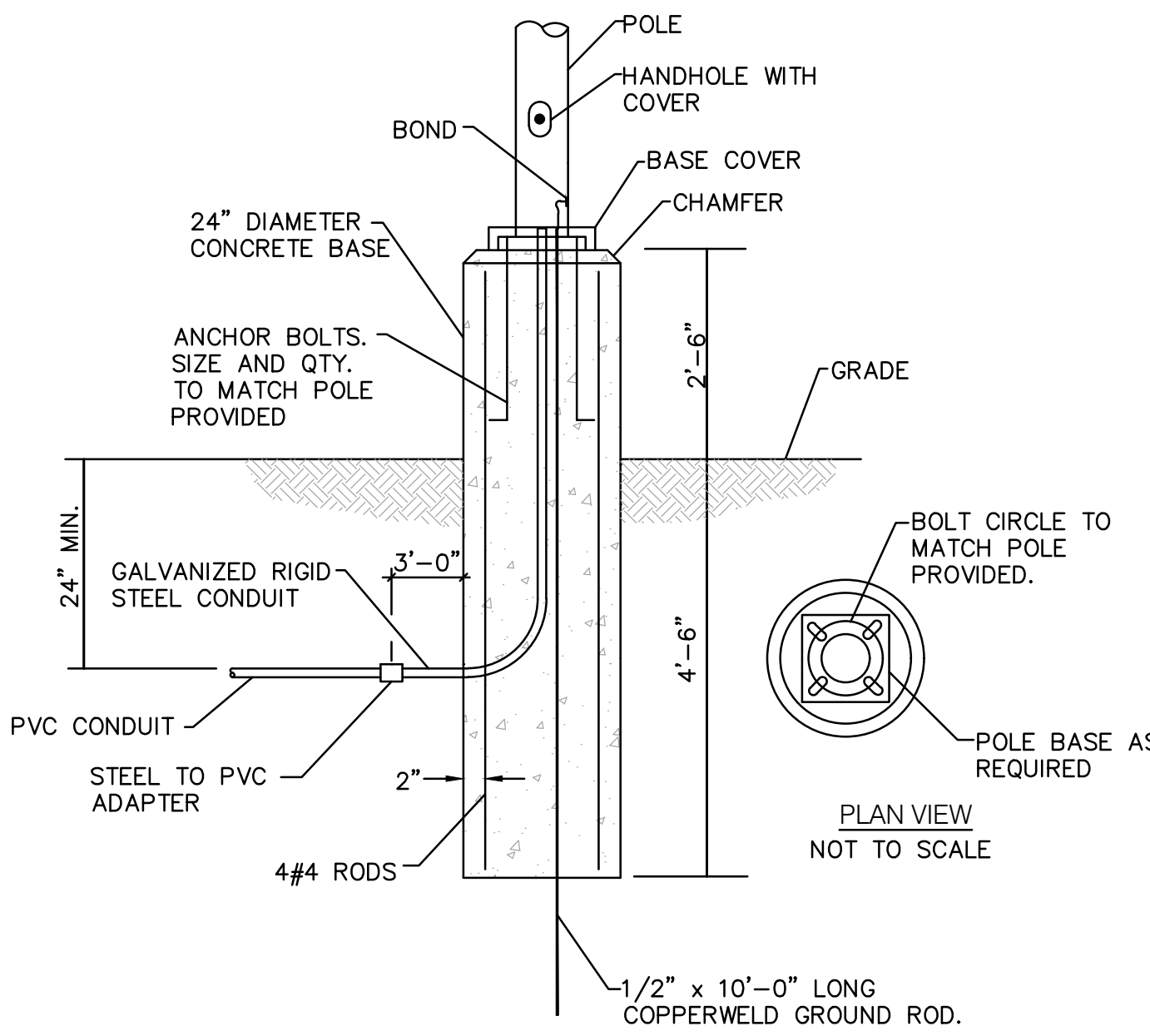
SECHAIN LINK FENCE
NOT TO SCALE



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



STORM DRAIN CLEAN-OUT DETAIL
NOT TO SCALE



TYPICAL POLE BASE DETAIL
NOT TO SCALE

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: ce@crossmaneng.com

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KEY PLAN

PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

MISCELLANEOUS DETAIL PLAN No. 2

DATE: JUNE 2023 SCALE: AS SHOWN
DWC. NAME: M280-C10-DETAIL2-R3.dwg

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

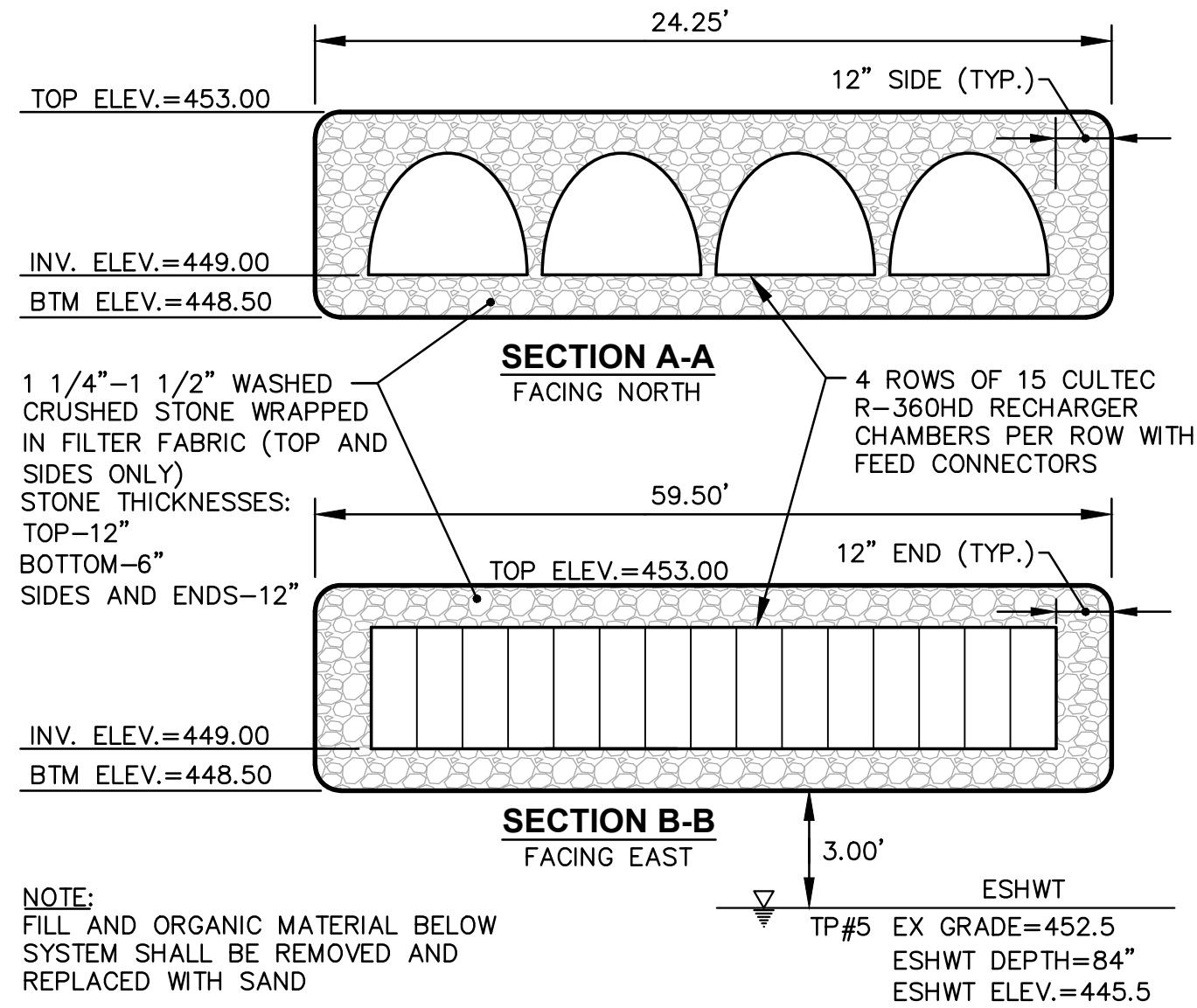
DRAWING NUMBER
C10
SHEET: 11 OF 21

DRAINAGE NOTES

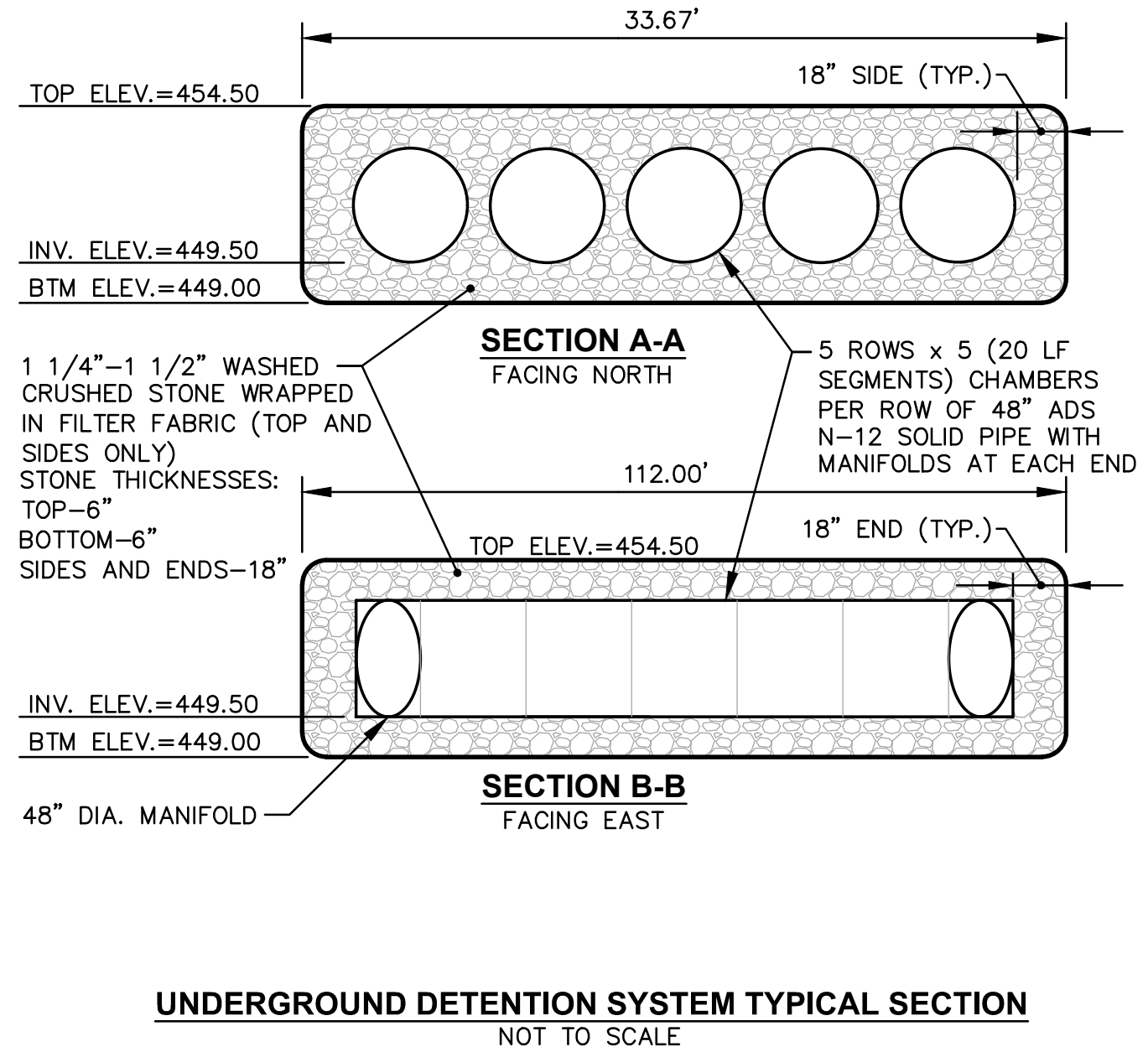
- CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
- ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
- ALL CATCH BASINS SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES. (NO WEEP HOLES)
- 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).
- GRADES WITH HANDICAP ACCESSIBLE PARKING SPACES AND AISLES SHALL NOT BE LESS THAN 1% OR GREATER THAN 2%.
- 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 TRANSPANTLING OR PLANTING NEW TREES IF NECESSARY.

INFILTRATION SYSTEM CONSTRUCTION NOTE

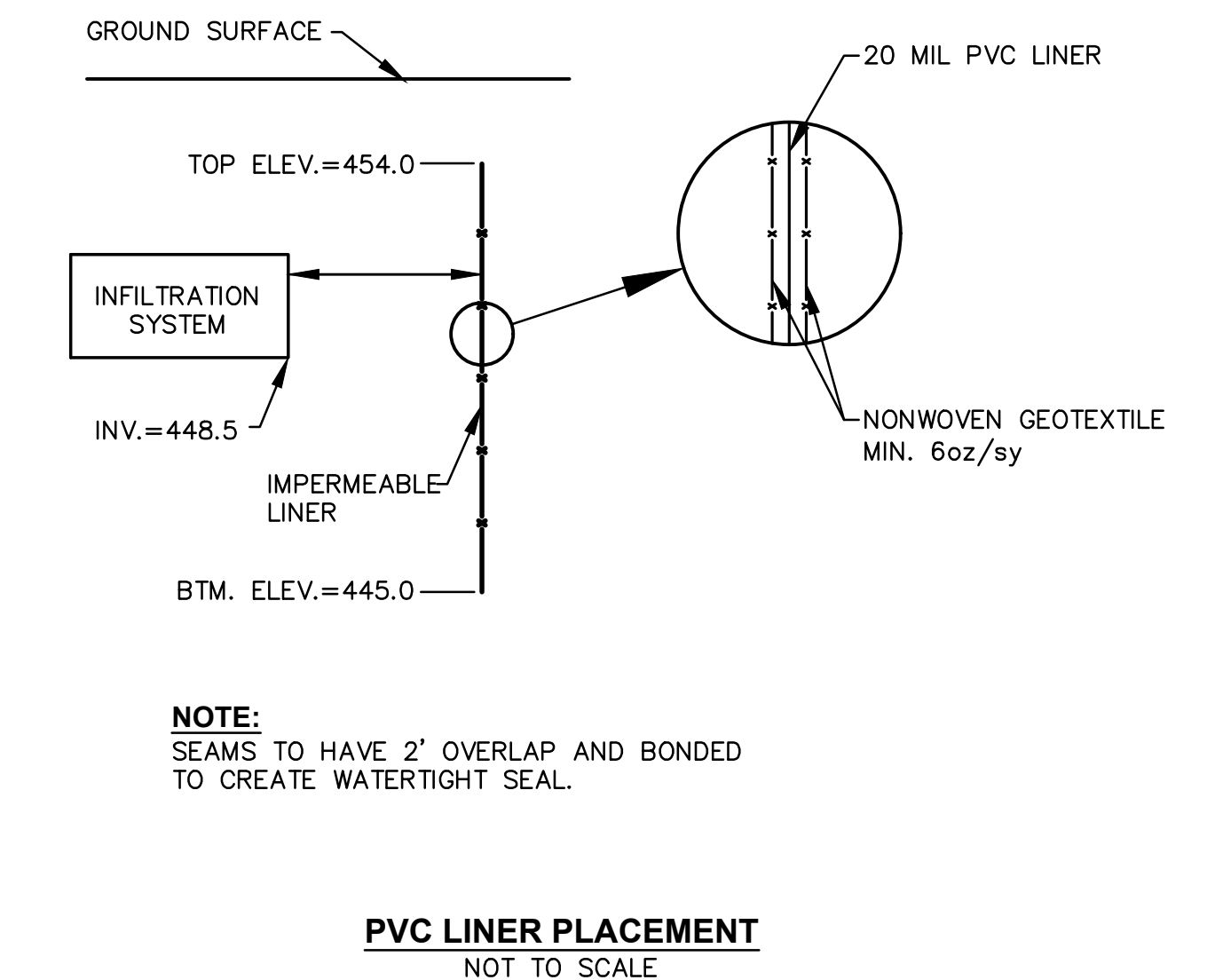
- WITHIN THE INFILTRATION SYSTEM, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND SUBSOIL AREAS (A AND B HORIZONS) AND ANY EXISTING SOILS THAT YIELD A PERMEABILITY RATE <1.02 INCHES/HOUR. CONTRACTOR SHALL COORDINATE INSPECTIONS WITH OWNER, ENGINEER, AND CONSERVATION AGENT DURING EXCAVATION FOR INFILTRATION UNITS PRIOR TO PLACEMENT OF STONE, AND AFTER CHAMBERS (AND FILTER FABRIC) HAVE BEEN INSTALLED PRIOR TO BACKFILLING. IF NECESSARY THE AREA SHALL BE PREPARED WITH SAND FILL SOIL MEETING THE MEDIA REQUIREMENTS OF SAND FILTERS, AS DESCRIBED IN THE MASSACHUSETTS STORMWATER HANDBOOK AND DESIGN STANDARDS, 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.
- INFILTRATION SYSTEM CONSTRUCTION AND MATERIALS SHALL CONFORM TO MASSACHUSETTS STORMWATER HANDBOOK AND DESIGN STANDARDS, LATEST EDITION AFTER CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE FINAL INSPECTIONS WITH THE OWNER.
- 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.
- THE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE ABOVE REFERENCED MANUAL. THE MANUAL CAN BE FOUND AT: <https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwater-standards>
- GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION; BY MARKING OFF THE INFILTRATION UNDERGROUND SYSTEM LOCATION BEFORE THE START OF CONSTRUCTION, AND BY CONNECTING UPSTREAM DRAINAGE AREAS ONLY AFTER CONSTRUCTION IS COMPLETE AND THE CONTRIBUTING AREA IS STABILIZED.
- 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 WITH GRAVEL BORROW. CONTRACTOR SHALL COORDINATE WITH ENGINEER.
- THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR THE PIPES TO BE USED IN THE UNDERGROUND INFILTRATION SYSTEMS TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SHOP DRAWINGS MUST VERIFY THAT THE PIPES CAN SUPPORT H-20 LOADING WITH THE SYSTEM SPECIFIC COVER.
- UNDERGROUND INFILTRATION SYSTEMS SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.



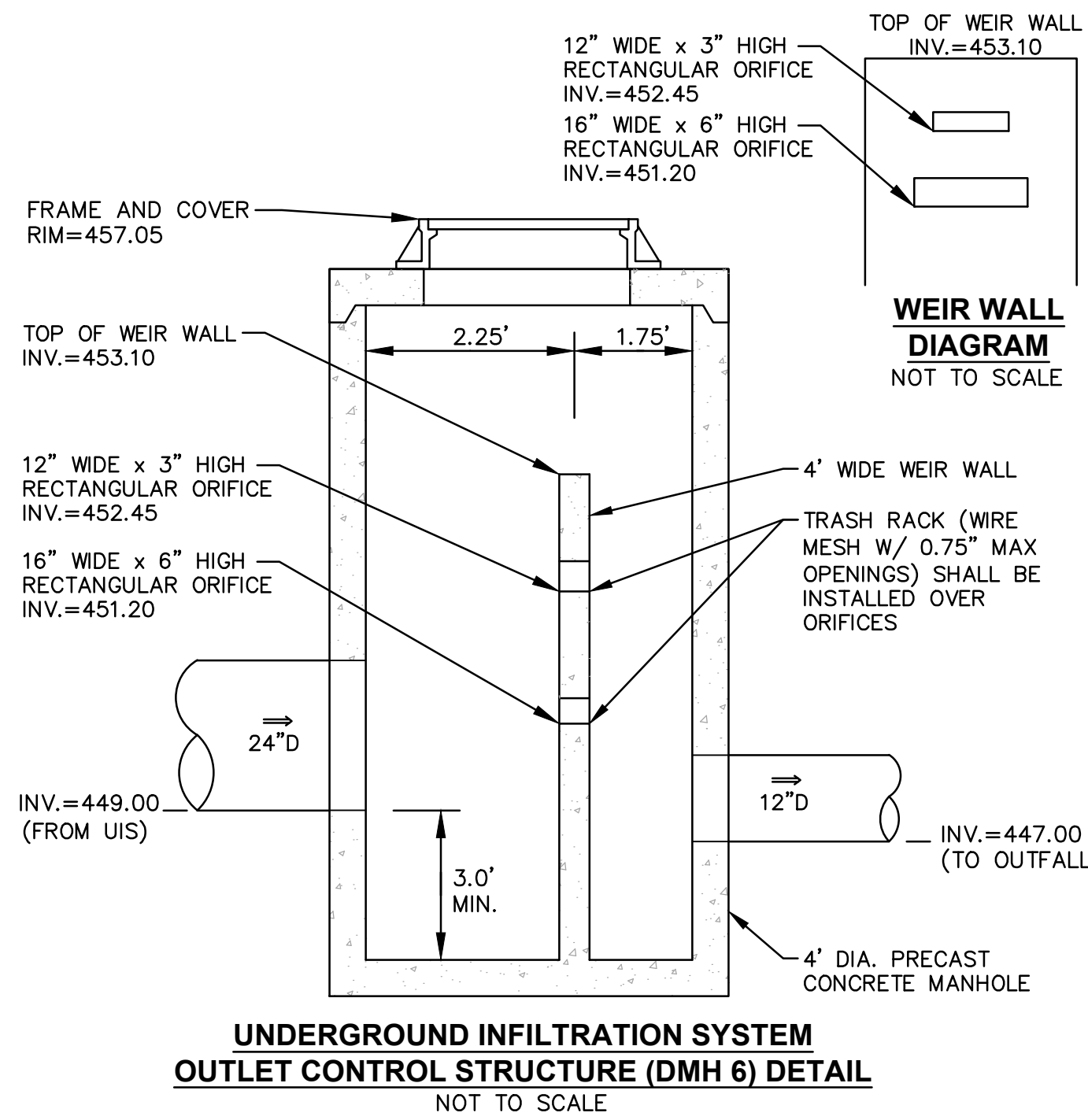
UNDERGROUND INFILTRATION SYSTEM TYPICAL SECTION
NOT TO SCALE



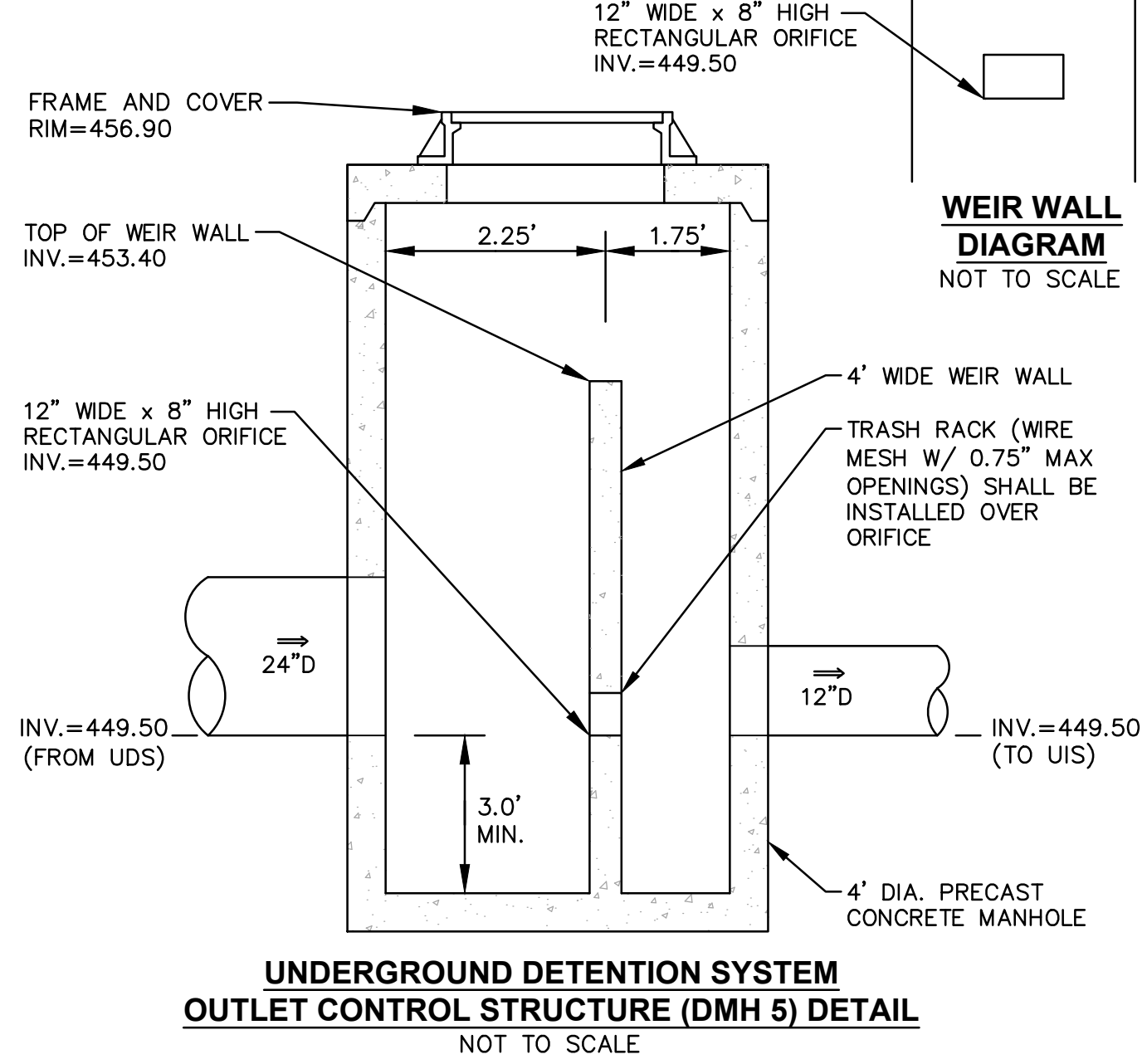
UNDERGROUND DETENTION SYSTEM TYPICAL SECTION
NOT TO SCALE



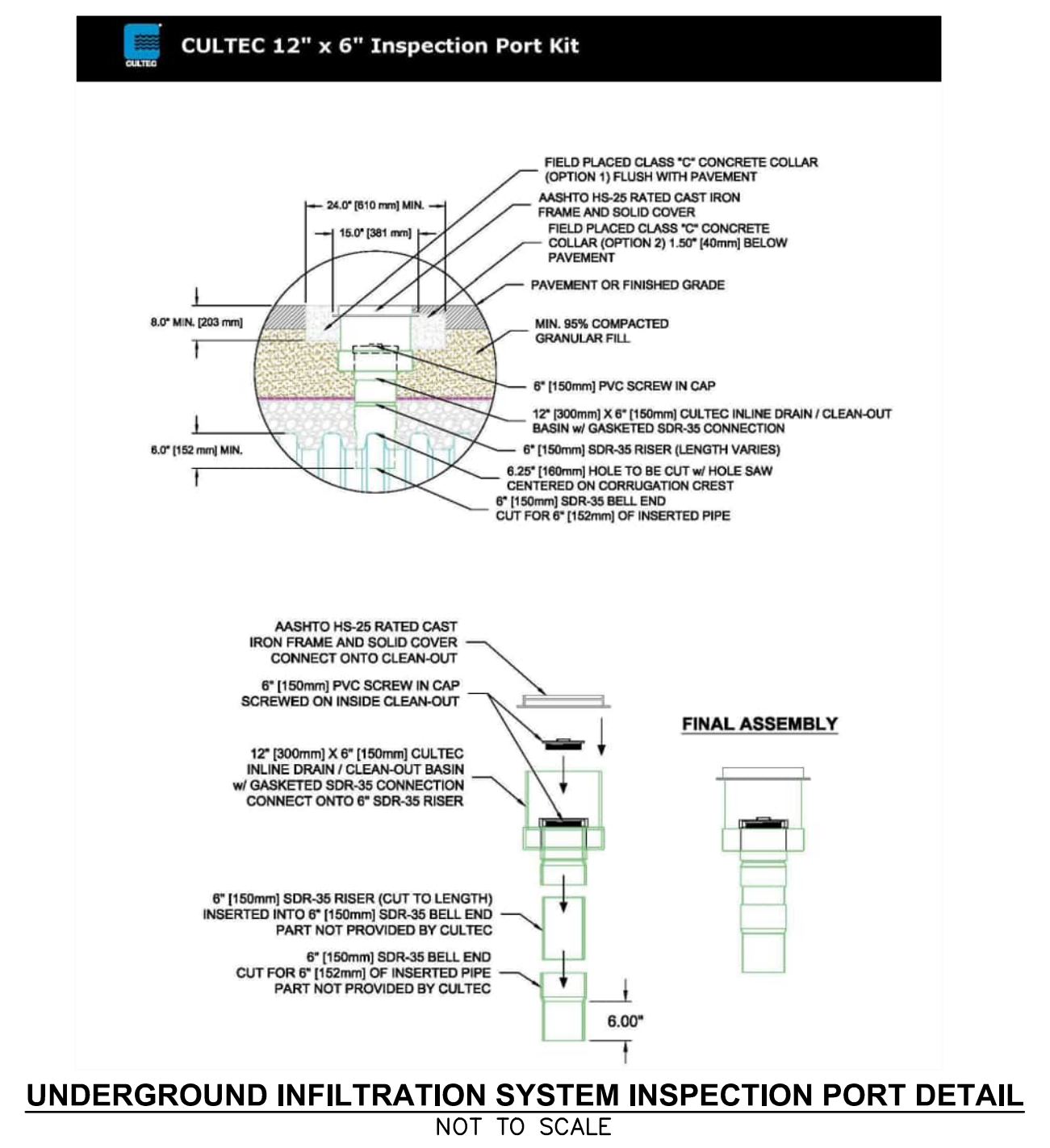
PVC LINER PLACEMENT
NOT TO SCALE



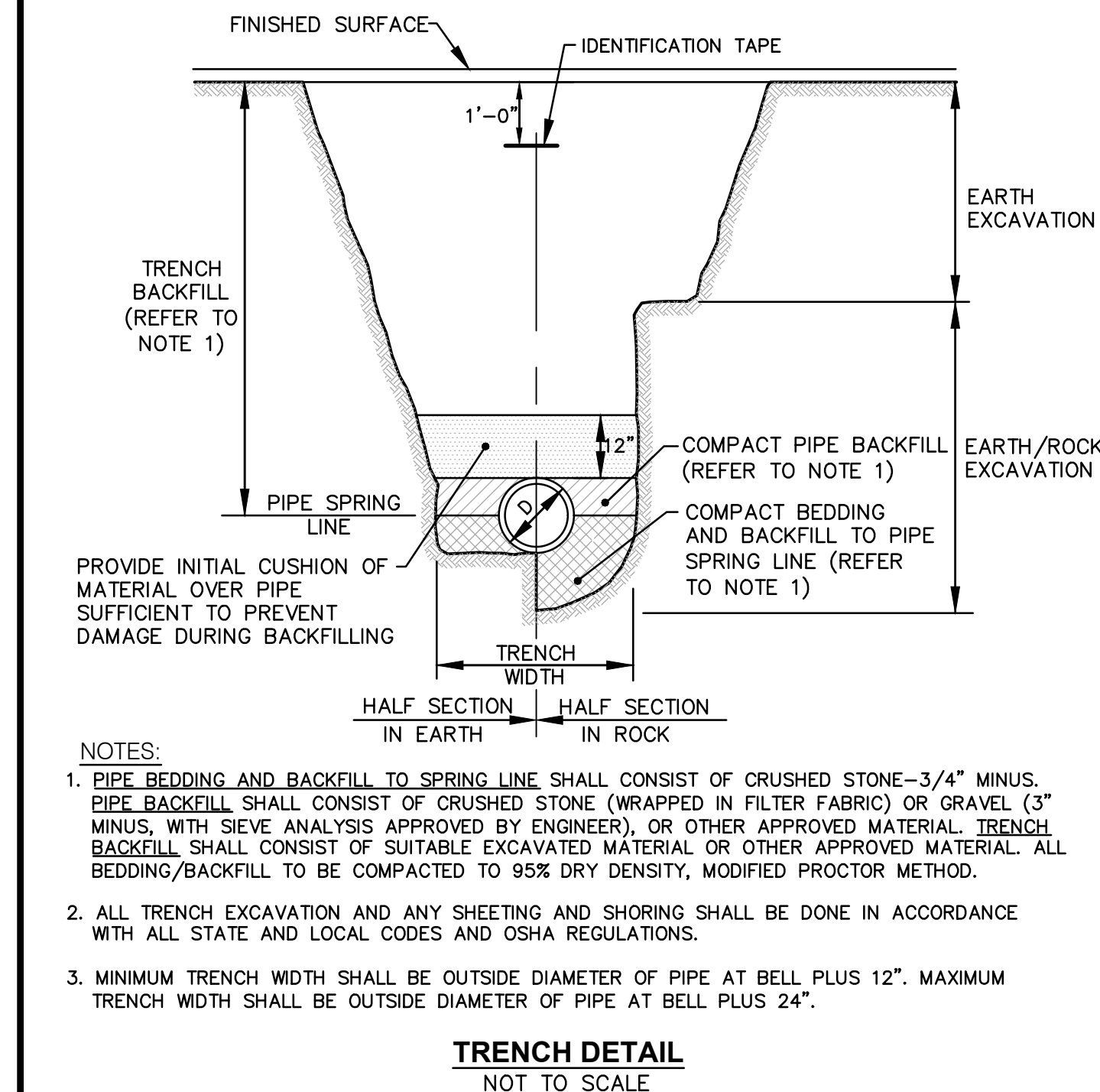
UNDERGROUND INFILTRATION SYSTEM OUTLET CONTROL STRUCTURE (DMH 6) DETAIL
NOT TO SCALE



UNDERGROUND DETENTION SYSTEM OUTLET CONTROL STRUCTURE (DMH 5) DETAIL
NOT TO SCALE



UNDERGROUND INFILTRATION SYSTEM INSPECTION PORT DETAIL
NOT TO SCALE



TRENCH DETAIL
NOT TO SCALE

- NOTES:**
- PIPE BEDDING AND BACKFILL TO SPRING LINE SHALL CONSIST OF CRUSHED STONE-3/4\"/>
 - ALL TRENCH EXCAVATION AND ANY SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND OSHA REGULATIONS.
 - MINIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 12\"/>

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

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KEY PLAN

PROJECT TITLE:
PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:
1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

DRAWING TITLE:
MISCELLANEOUS
DETAIL PLAN No. 3

DATE: JUNE 2023
SCALE: AS SHOWN
DWG. NAME: M280-C11-DETAIL3-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C11
SHEET: 12 OF 21

STORMCEPTOR DESIGN NOTES

THE STANDARD STORMCEPTOR CONFIGURATION IS SHOWN.

PLAN VIEW
TOP SLAB NOT SHOWN

SECTION A-A

STORMCEPTOR
STC900
STANDARD DETAIL
(DMH 4)
NOT TO SCALE

CONTECH
ENGINEERED SOLUTIONS LLC
1000 STATE STREET, SUITE 100
BOSTON, MA 02111

STC900
STORMCEPTOR
STANDARD DETAIL

SITE SPECIFIC DATA REQUIREMENTS

ITEM	REQUIREMENT
1	WATER QUALITY FLOW RATE (GPM)
2	WATER QUALITY FLOW RATE (MGD)
3	RETURN PERIOD OF FLOOD (YRS)
4	INLET PIPE 1
5	INLET PIPE 2
6	OUTLET PIPE

GENERAL NOTES:

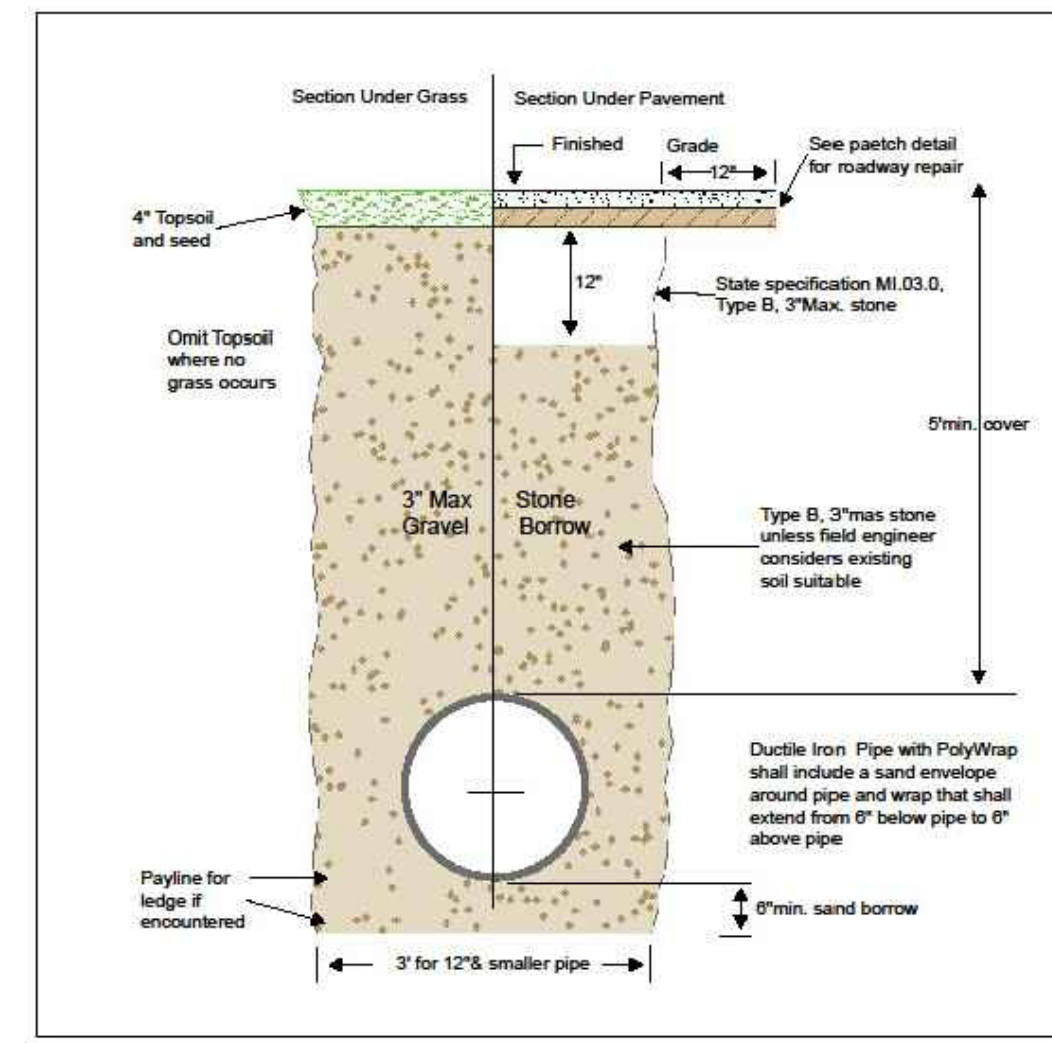
- VERIFY TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH UNUSUAL STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEER.
- FOR SITE SPECIFIC DRAWINGS WITH UNUSUAL STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEER.
- CONTRACTOR TO VERIFY WATER QUALITY FLOW RATE IS IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO VERIFY STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STORMCEPTOR STRUCTURE SHALL MEET AASHTO H-20 LOAD RATING, ASSUMING EARTH COVER OF 2' (2) BELL AND BUCKLE/UNDERMINER ELEVATION TO BE BELOW THE OUTLET PIPE ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL UNDERMINER ELEVATION.
- CONTRACTOR SHALL MEET AASHTO H-20 LOAD RATING. USE WITH THE CORRECTED LOAD.
- STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C918 AND AASHTO LOAD FACTOR DESIGN METHOD.
- ALTERNATE UNITS ARE SHOWN IN PARENTHESES (mm).

INSTALLATION NOTES:

- ANY EARTH BACKFILL DEPTH AND/OR ANTI-FLOUNDER PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO VERIFY STRUCTURE IS WITH SUFFICIENT LIFTED AND READY CAPACITY TO LIFT AND SET THE STORMCEPTOR UNASSEMBLED STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
- CONTRACTOR TO PROVIDE INSTALL AND GROUT INLET AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CONTRACTOR TO MAKE PER OPENING CENTERLINE.
- CONTRACTOR TO TAKE CARE TO ASSURE THAT WATER TIGHT HOLDING WATER TO FLOUNDER BASKING. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

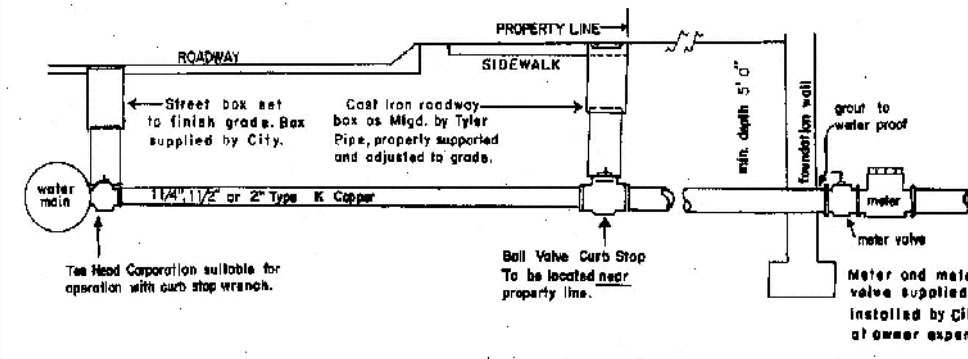
WATER NOTES

- ALL INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CURRENT RULES AND REGULATIONS OF THE AWWA STANDARDS, DEP GUIDELINES, CITY OF WORCESTER - DEPARTMENT OF PUBLIC WORKS AND PARKS - STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS.
- CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, BENDS, TEES, FITTINGS, THRUST BLOCKS, GATE VALVES, GATE BOXES, SERVICE CONNECTIONS AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
- CONCRETE THRUST, ANCHOR, OR BEARING BLOCKS SHALL BE INSTALLED IN LOCATIONS INDICATED AND AT ALL BENDS, FITTINGS, PLUGS, ETC. WHEN A THRUST BLOCK CANNOT BE PLACED AGAINST UNDISTURBED EARTH, A MECHANICAL RESTRAINED JOINT PIPE MAY BE UTILIZED.
- PRESSURE AND LEAKAGE TESTS AND DISINFECTING PIPES SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO LOCAL WATER DEPARTMENT REQUIREMENTS, AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
- ALL GATE VALVES, FITTINGS, PIPE, JOINTS, ETC. SHALL BE DESIGNED FOR 1.5 TIMES WORKING PRESSURE BUT NOT LESS THAN 250 PSI.
- WATER PIPE SHALL BE LOCATED AT A DEPTH OF COVER EQUAL TO 5' MINIMUM. A MINIMUM OF 10- FEET HORIZONTAL OR 18-INCH VERTICAL SEPARATION SHALL BE MAINTAINED IN THE PLACEMENT OF WATER MAINS, SERVICES, OR APPURTENANCES WITHIN THE VICINITY OF SEWER FACILITIES, OR VICE VERSA. WHERE THE ABOVE SEPARATION DISTANCES CANNOT BE ACHIEVED, THE SANITARY SEWER PIPE SHALL BE ENCASED WITHIN A DUCTILE IRON CARRIER PIPE FOR A DISTANCE EQUAL TO 10- FEET ON EITHER SIDE OF THE AREA OF CONCERN. CONCRETE ENCASEMENT IS NOT ALLOWED.
- ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS GATE VALVE, PIPE, THRUST BLOCKS, FITTINGS, CASTINGS, ETC. SHALL BE SUBMITTED TO THE LOCAL WATER AUTHORITY AND ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
- THE FINAL LOCATIONS FOR ALL INTERIOR PIPING, BACK FLOW PREVENTORS AND VALVES SHALL BE VERIFIED WITH THE PLUMBING AND FIRE SPRINKLER SYSTEM SUB-CONTRACTORS.
- THE MANUFACTURER AND MODEL OF BACK FLOW PREVENTORS ARE TO BE VERIFIED BY THE APPROPRIATE PLUMBING AND FIRE SPRINKLER SUB-CONTRACTORS; AND MUST BE APPROVED FOR USE BY THE LOCAL WATER AUTHORITY PRIOR TO ORDERING.
- AS-BUILT DRAWINGS MUST BE FURNISHED BY THE CONTRACTOR TO, AND APPROVED BY, THE LOCAL WATER AUTHORITY PRIOR TO WATER SERVICE ACTIVATION.
- THE CONTRACTOR SHALL FURNISH AND INSTALL SUITABLE TEMPORARY TESTING PLUGS, CAPS, PUMPS, PIPE CONNECTIONS, AND OTHER APPURTENANCES, AS NECESSARY, TO OBTAIN SAMPLES.



Rev. No.	By	Date
1	M.F.J.	1/24/79
2	A.V.C.	4/13/83
3	A.C.M.	4/1/05

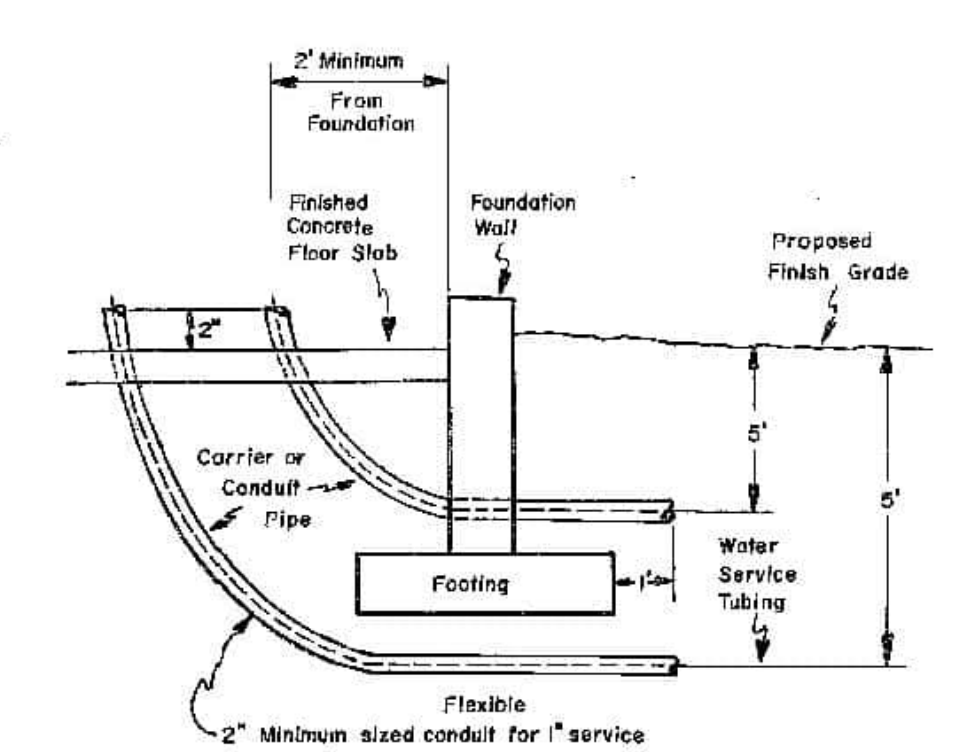
City of Worcester DPW&P Water Operations



- GENERAL NOTES**
- Fittings and valves shall be manufactured by Form or approved equal. Corporation: Ford FD1000 with two lead adapter (cc thread's comp.). Ball valve curb stop: First 8/4 series full port (comp. x comp.).
 - Mains 16 inches in diameter and larger: Taps shall be by direct means only.
 - Mains smaller than 16 inches in diameter: Service saddles shall be used. Saddles shall be double strap equal to Rockwell 313.
 - Sand shall be used for backfilling from a point 6 inches below the pipe to a point 12 inches above the pipe. The remaining backfill shall have no stones greater than 3 inches in their largest dimension. Before any excavation is done and any pipe is installed, permits shall be obtained from the Management Services office at 20 East Worcester St. and the Water Engineering office at 18 East Worcester St. All paving shall conform to City of Worcester P.U.W. standards.
 - Services shall be flushed before activating to avoid water logging.
 - Main valves are to be operated by the City only. Costs incurred in shutting down mains due to negligence of the Contractor, as determined by the field inspector, shall be paid by the Contractor. The Contractor shall inform the owner and the City wire inspector of proper grounding requirements pursuant to M.G.L. Chapter 165, Section 1C.
 - On new services, in accordance with the Mass. Department of Environmental Protection Code 5 and its amendments, the water services shall be a minimum of 10 horizontal feet from the sewer service.
 - The Contractor shall furnish and completely install the service from corporation to the meter valves with new materials.
 - Upon installation of this service box, the Contractor shall operate the valve to the satisfaction of the Field Inspector prior to acceptance of the job.

Rev. No.	By	Date
1	ACM	6/18/88
2	AVC	2/12/92
3	AVC	4/1/97

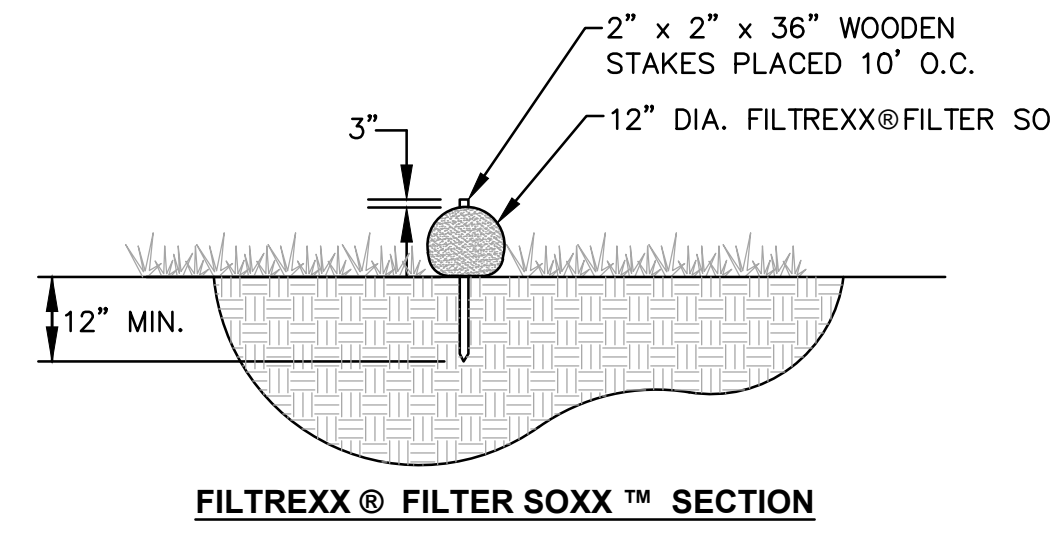
WATER SERVICE DETAIL
TYPICAL 2 INCH,
1 1/2 INCH or 1 1/4 INCH
CITY OF WORCESTER
D. P. W. & P.
WATER OPERATIONS



- GENERAL NOTES**
- When any water service 1-inch or less in size is to be installed under a concrete floor slab, the pipe shall be installed inside an approved conduit. This conduit shall be used as a sleeve or carrier pipe to receive the ungrounded water service pipe.
 - The size of the conduit shall be at least twice the diameter of the water service pipe being installed.
 - This conduit shall be installed as shown in drawing W-80 which is part of these specifications.

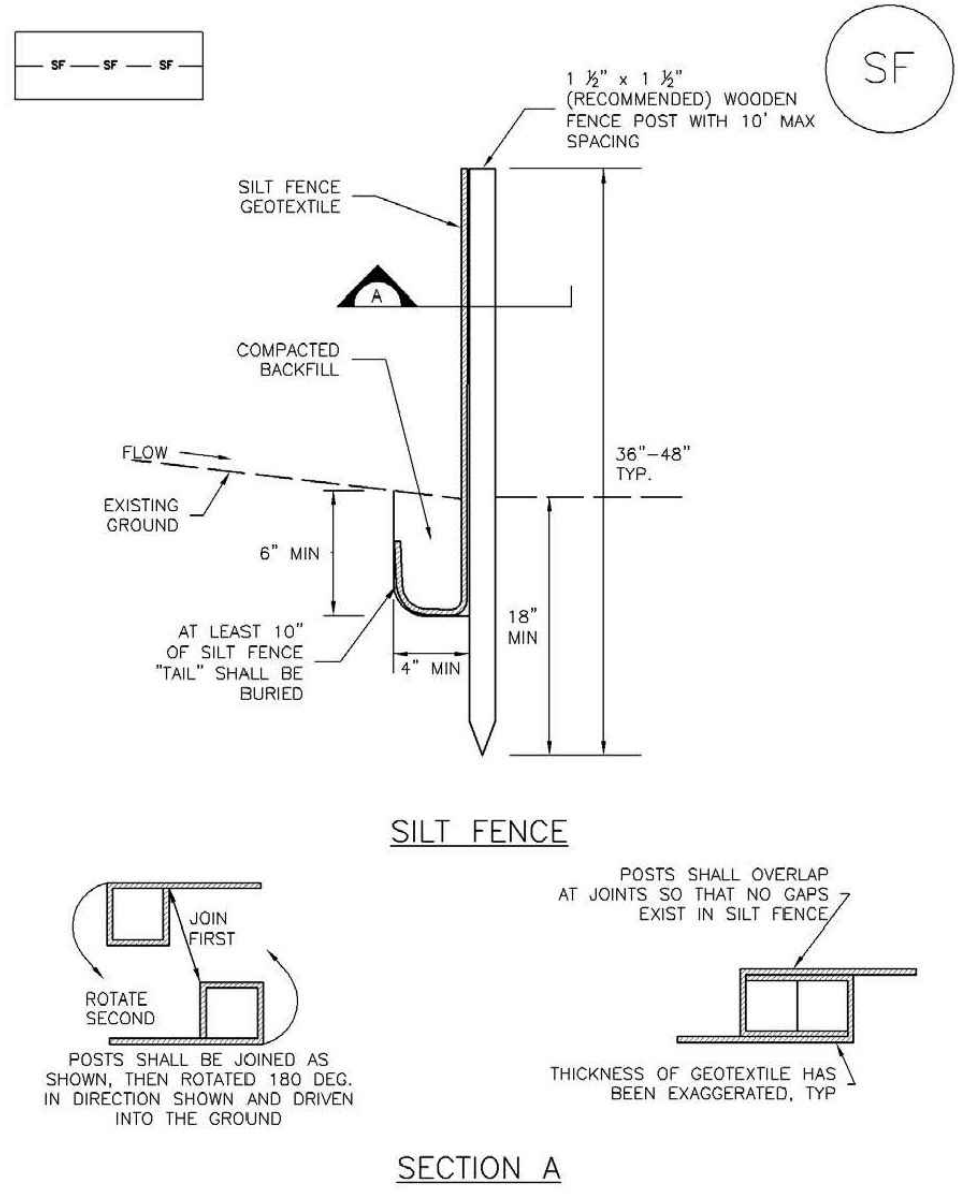
Rev. No.	By	Date

WATER SERVICE
ENTRANCE DETAIL
CITY OF WORCESTER
D. P. W. & P.
WATER OPERATIONS



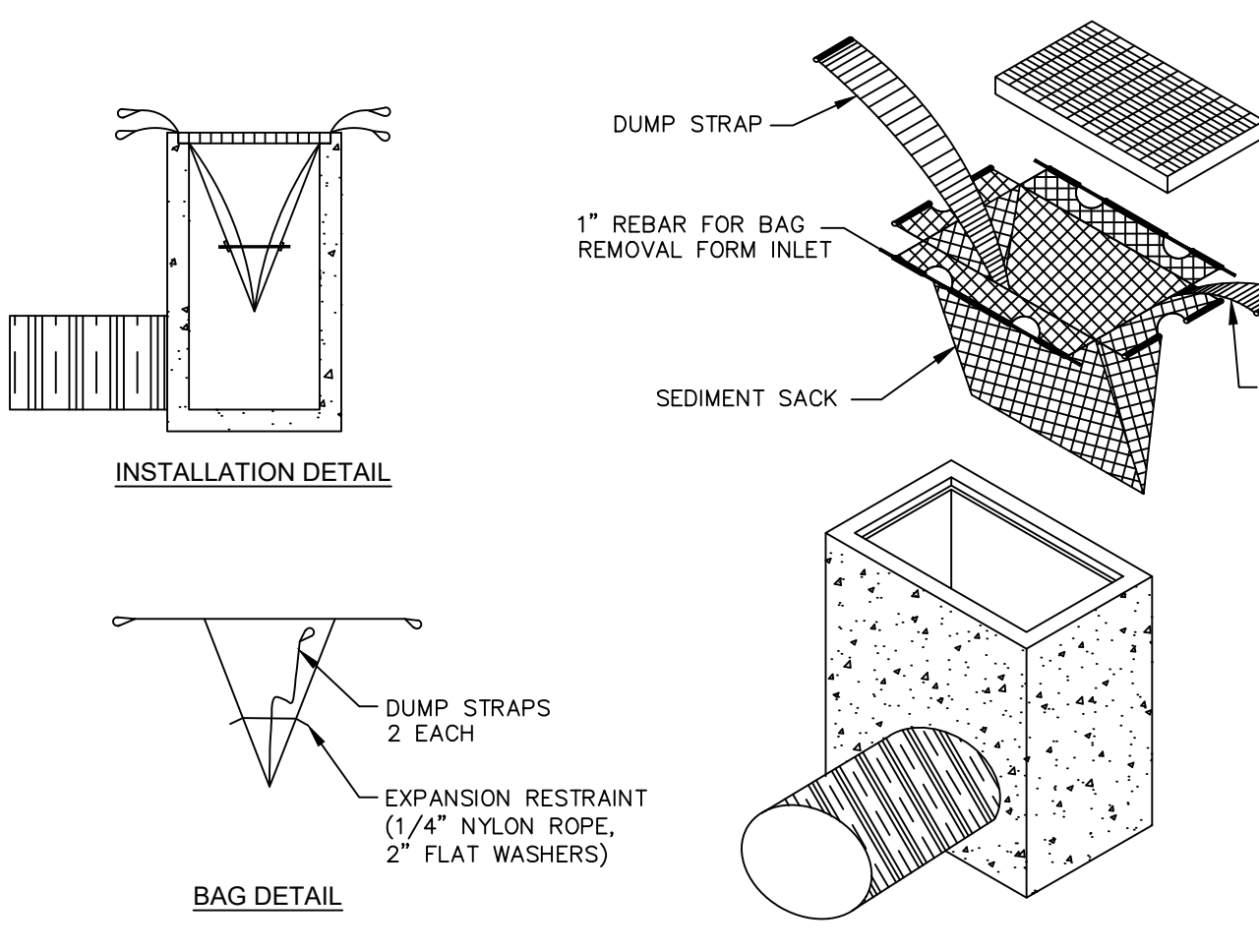
- NOTES**
- CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE FILTREXX PRODUCTS AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT.
 - ALL MATERIAL SHALL MEET FILTREXX SPECIFICATIONS.
 - COMPOST MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY ENGINEER.

FILTREXX® FILTER SOXX™ DETAIL
NOT TO SCALE



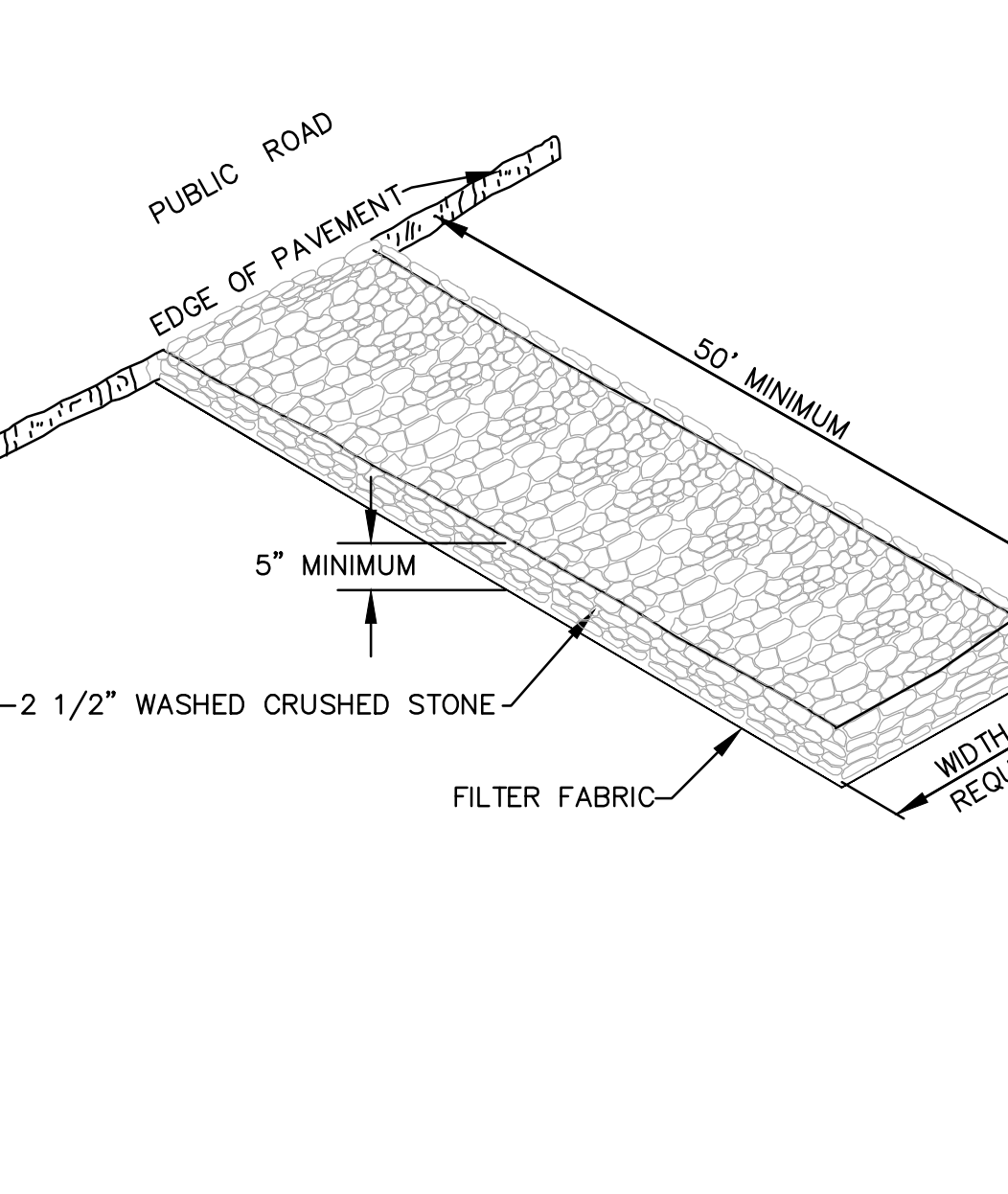
SILT FENCE DETAIL
NOT TO SCALE

- SILT FENCE INSTALLATION NOTES**
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
 - A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
 - COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
 - SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
 - SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
 - AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "U-HOOK." THE "U-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
 - SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- SILT FENCE MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
 - REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
 - SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
 - WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

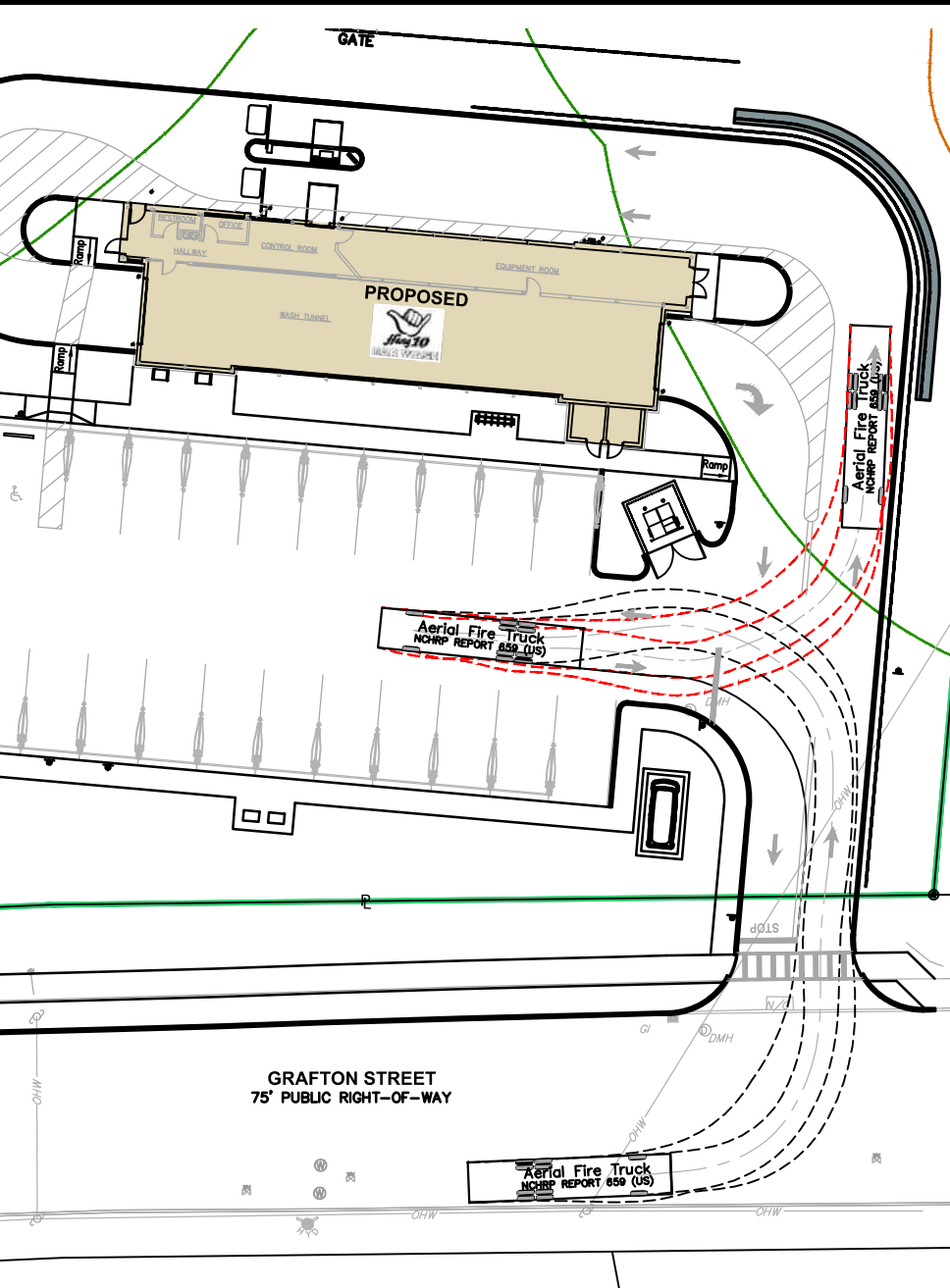


- NOTES**
- INSTALL SILT SACK AT CATCH BASINS IN VICINITY OF CONSTRUCTION.
 - CONTRACTOR SHALL SUBMIT SILT SACK PRODUCT TO ENGINEER FOR APPROVAL.

TYPICAL SILT SACK DETAIL
NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



FIRE TRUCK TURNING PATH
SCALE: 1"=40'

OneWash DesignServices
"GENERIC VACUUM 1100"

Vacuum Generic
Scale: 1"=40'

Crossman Engineering
Rhode Island
151 Centerville Road
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103 Commonwealth Avenue
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Email: cel@crossmaneng.com

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KEY PLAN

PROJECT TITLE:
**PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA**

PREPARED FOR:
**1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023**

DRAWING TITLE:
**MISCELLANEOUS
DETAIL PLAN No. 4**

DATE: JUNE 2023
SCALE: AS SHOWN
DWC. NAME: M280-C12-DETAIL4-R3.dwg

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

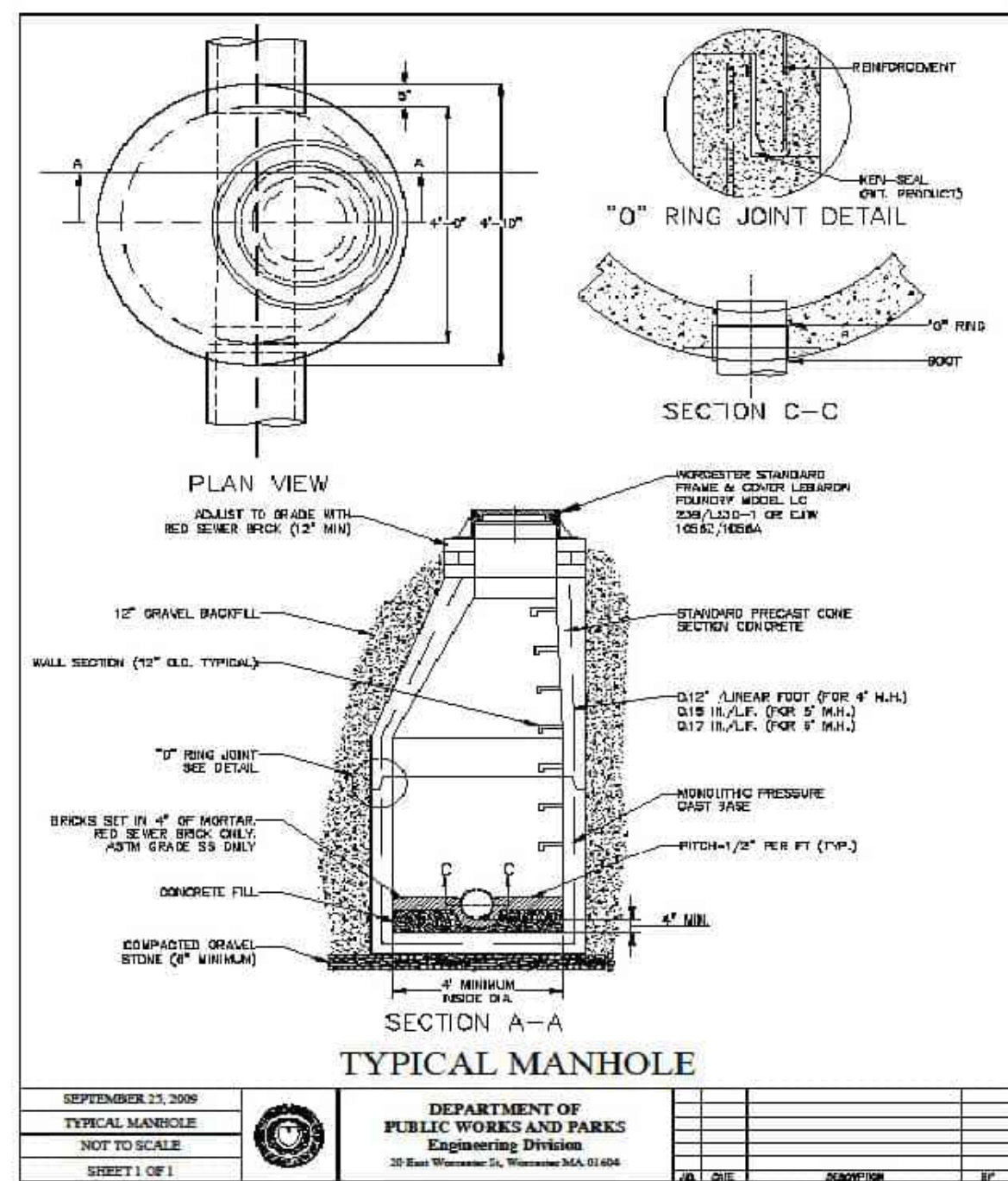
DRAWING NUMBER
C12
SHEET: 13 OF 21

GENERAL SEWER NOTES

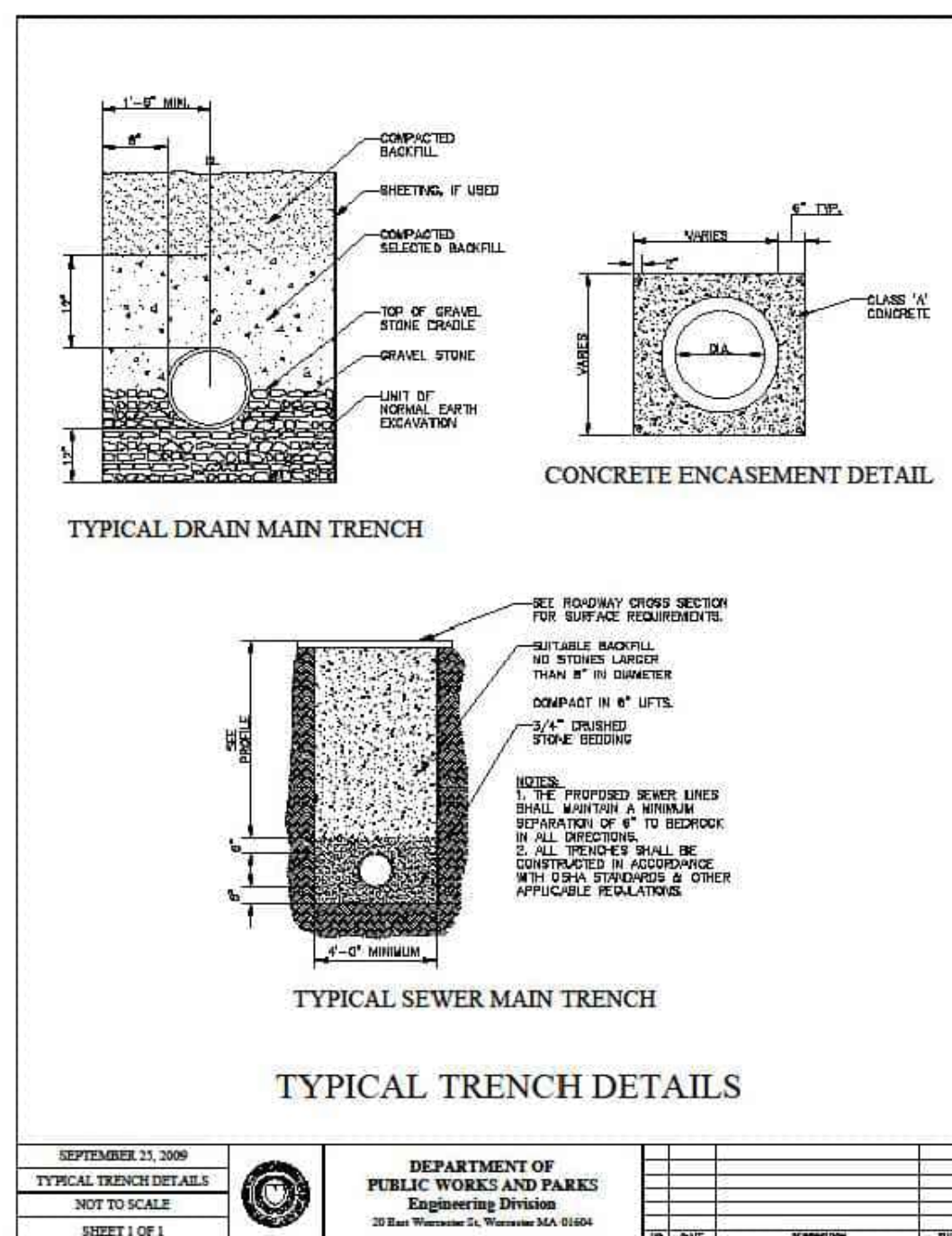
- INSTALLATION OF THE SEWERAGE FACILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS SPECIFICATIONS AND REQUIREMENTS.
- ALL SEWERAGE FACILITIES SHALL MEET TESTING AND CLEANING REQUIREMENTS PRIOR TO ACCEPTANCE.
- THE CONTRACTOR IS RESPONSIBLE TO COORDINATE AS-BUILT LOCATIONS PRIOR TO PIPE BACKFILL. AS-BUILT DRAWINGS SHALL BE FURNISHED AS A CONDITION FOR ACCEPTANCE OF THE NEW SEWERAGE FACILITIES. PLANS SHALL INCLUDE LOCATION OF WYES.
- NO FLOW WILL BE ACCEPTED UNTIL ALL ABOVE STEPS ARE COMPLETED AND COMPLETION CERTIFICATE IS ISSUED.
- AFTER THE CONTRACTOR HAS "STAKED OUT" THE FACILITIES TO BE CONSTRUCTED AND HAS THE APPROVED MATERIALS ON THE JOB, NBO SHALL BE NOTIFIED IN ADVANCE OF CONSTRUCTION IN ORDER FOR THEM TO ARRANGE FOR THEIR INSPECTOR. THE NOTIFICATION MUST MEET WORCESTER REQUIREMENTS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS AND MATERIALS. STANDARDS AND SPECIAL DETAILS, AND STANDARD SPECIFICATIONS, ANY WORK NOT MEETING THE APPROVED STANDARDS SHALL BE IMMEDIATELY REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION WITHIN THE LIMITS OF WORK AS SHOWN ON THE DRAWINGS.
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE LOAMED AND SEEDDED.
- LOCATION AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY AUTHORITIES INCLUDING "DIG-SAFE" PRIOR TO STARTING WORK. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COST OF REPAIRS SHALL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- RELATION TO WATER LINES:
 - HORIZONTAL SEPARATION: WHENEVER POSSIBLE, SEWERS SHOULD BE LAID AT A MINIMUM OF 10 FEET (3.0 m), HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER LINE. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, A SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER LINE IF:
 - IT IS LAID IN A SEPARATE TRENCH, OR IF
 - IT IS LAID IN THE SAME TRENCH WITH THE WATER LINE LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND IF
 - IN EITHER CASE THE ELEVATION OF THE TOP (CROWN) OF THE SEWER IS AT LEAST 18 INCHES (46 cm) BELOW THE BOTTOM (INVERT) OF THE WATER LINE.
 - VERTICAL SEPARATION: WHENEVER A SEWER MUST CROSS UNDER WATER LINES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES (46 cm) BELOW THE BOTTOM OF THE WATER LINE. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER LINE SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET (3.0 m) ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER LINE SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
 - WHEN IT IS IMPOSSIBLE TO OBTAIN HORIZONTAL AND/OR VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER LINE AND SEWER SHALL BE CONSTRUCTED OF MECHANICAL-JOINT CEMENT LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT BASED ON WATER TIGHTNESS AND STRUCTURAL SOUNDNESS. BOTH PIPES SHALL BE PRESSURE TESTED BY AN APPROVED METHOD TO ASSURE WATER TIGHTNESS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING REQUIRED IN THE SEWER INSTALLATION.
- THE PROPOSED GRAVITY SANITARY SEWER PIPE SHALL BE PVC ASTM 3034 SDR 35, UNLESS OTHERWISE SHOWN ON PLANS. PIPE SIZE TO MATCH UTILITY PLAN.
- THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE ELEVATION OF EXISTING SEWER LINE PRIOR TO INSTALLATION.

SEWER TRENCH NOTES

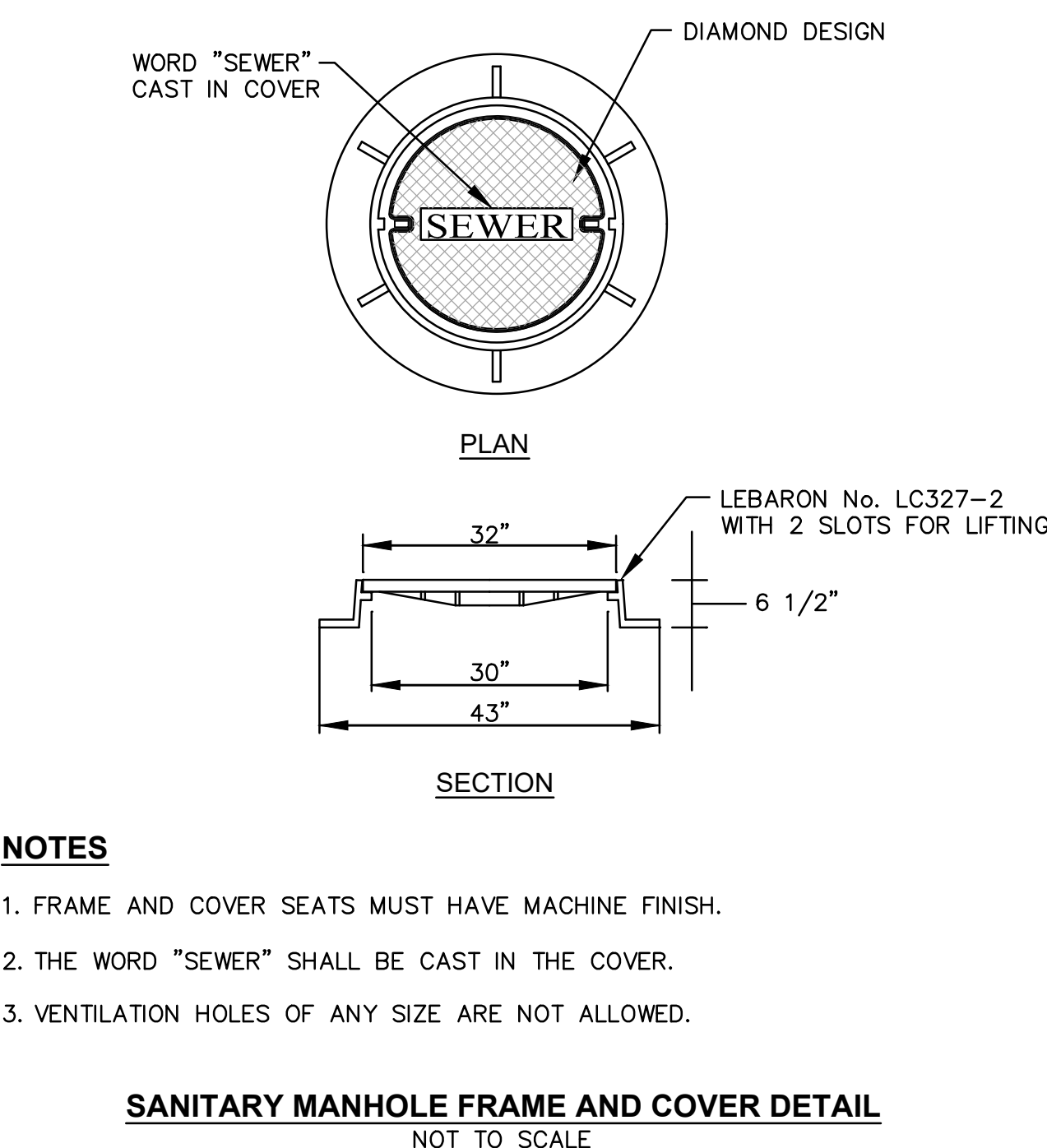
- MINIMUM WIDTH (W) OF TRENCH IS EQUAL TO THE INSIDE DIAMETER OF THE PIPE PLUS 12" EACH SIDE.
- SOIL UNDER CRUSHED STONE FOUNDATION SHALL BE UNDISTURBED AND COMPACTED MATERIAL WITH SEVERAL PASSES OF A VIBRATORY PLATE COMPACTOR TO ATTAIN 95% MAX. DENSITY (MOD. METHOD).
- CRUSHED STONE FOUNDATION 3/4" MAXIMUM SIZE, SHALL BE PLACED 6" UNDER THE PIPE AND UP TO THE PIPE LAID THEREON, CRUSHED STONE PULLED AGAINST THE PIPE SIDES TO FIRMLY HOLD THE PIPE IN PLACE.
- CRUSHED STONE HAUNCHING 3/4" MAXIMUM SIZE SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE.



SEPTEMBER 11, 2009	DEPARTMENT OF PUBLIC WORKS AND PARKS	Engineering Division	28 Blue Hill Street, Worcester, MA 01608
TYPICAL MANHOLE	NOT TO SCALE	SHEET 1 OF 1	DATE: 09/11/09



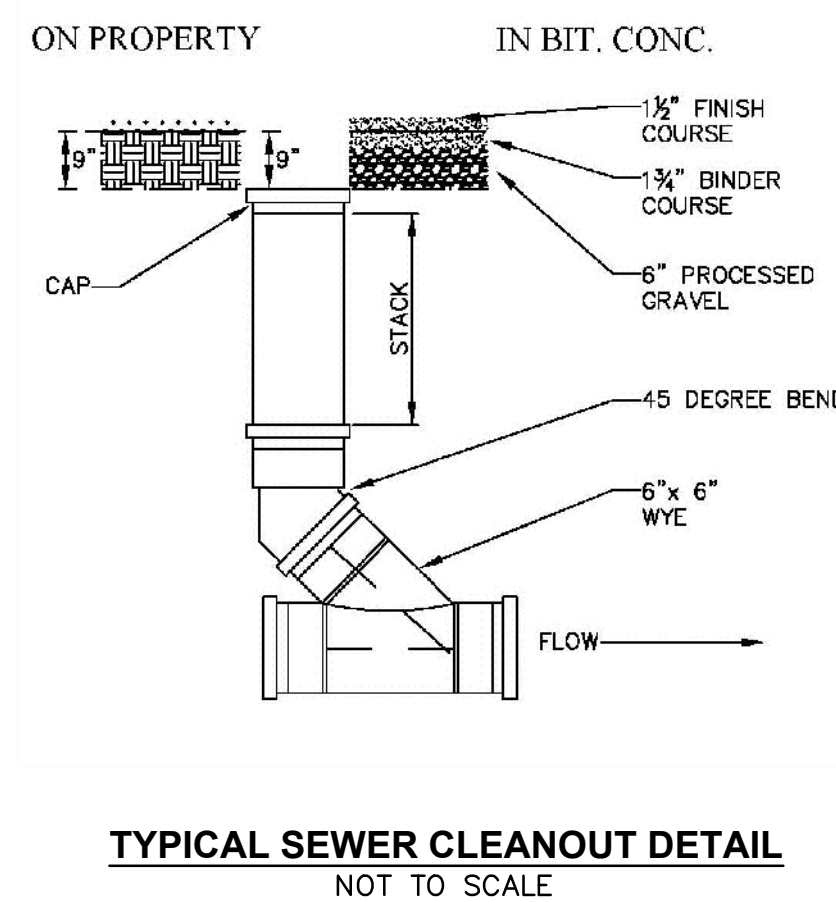
SEPTEMBER 11, 2009	DEPARTMENT OF PUBLIC WORKS AND PARKS	Engineering Division	28 Blue Hill Street, Worcester, MA 01608
TYPICAL TRENCH DETAILS	NOT TO SCALE	SHEET 1 OF 1	DATE: 09/11/09



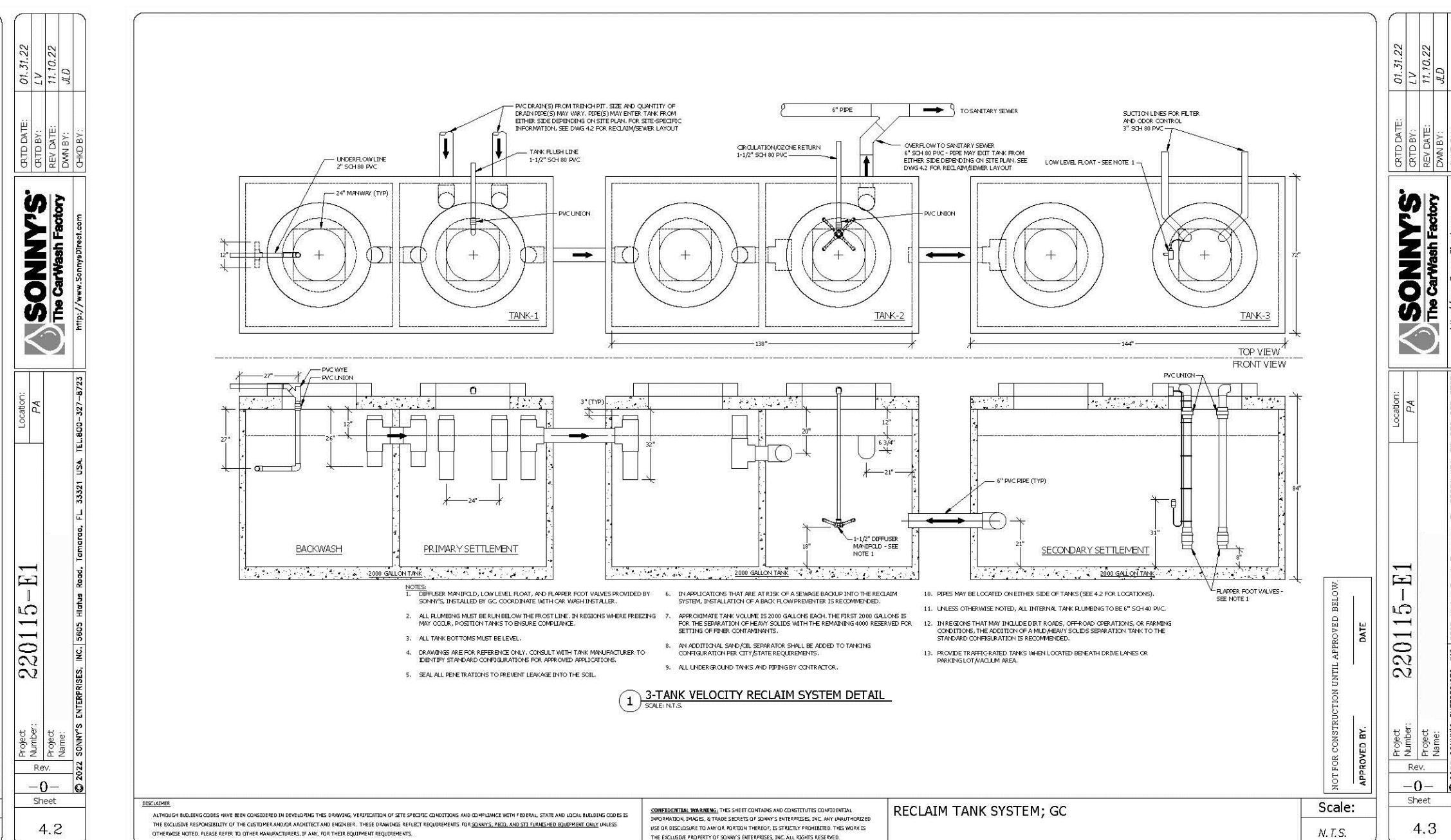
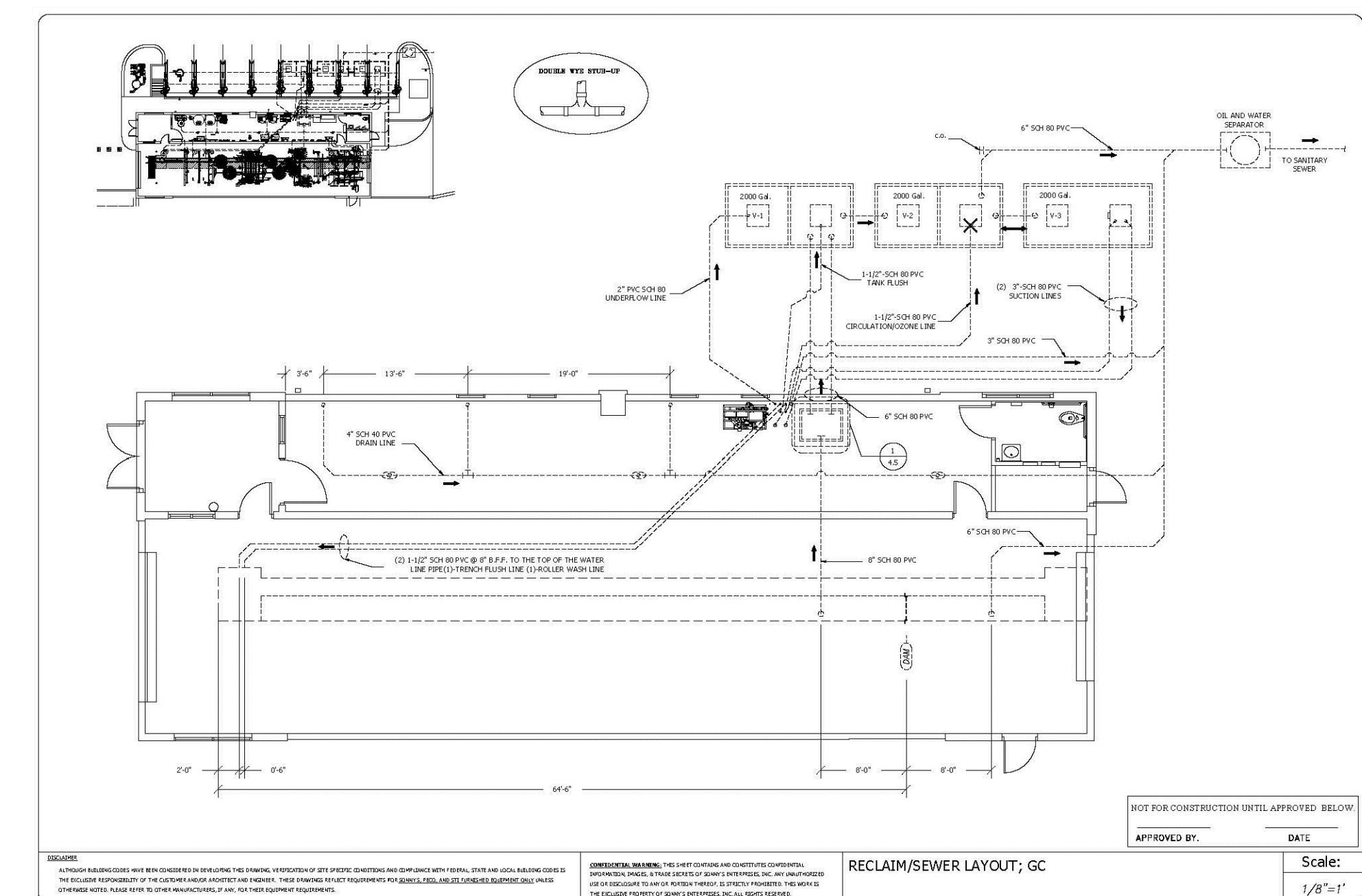
NOTES

- FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.
- THE WORD "SEWER" SHALL BE CAST IN THE COVER.
- VENTILATION HOLES OF ANY SIZE ARE NOT ALLOWED.

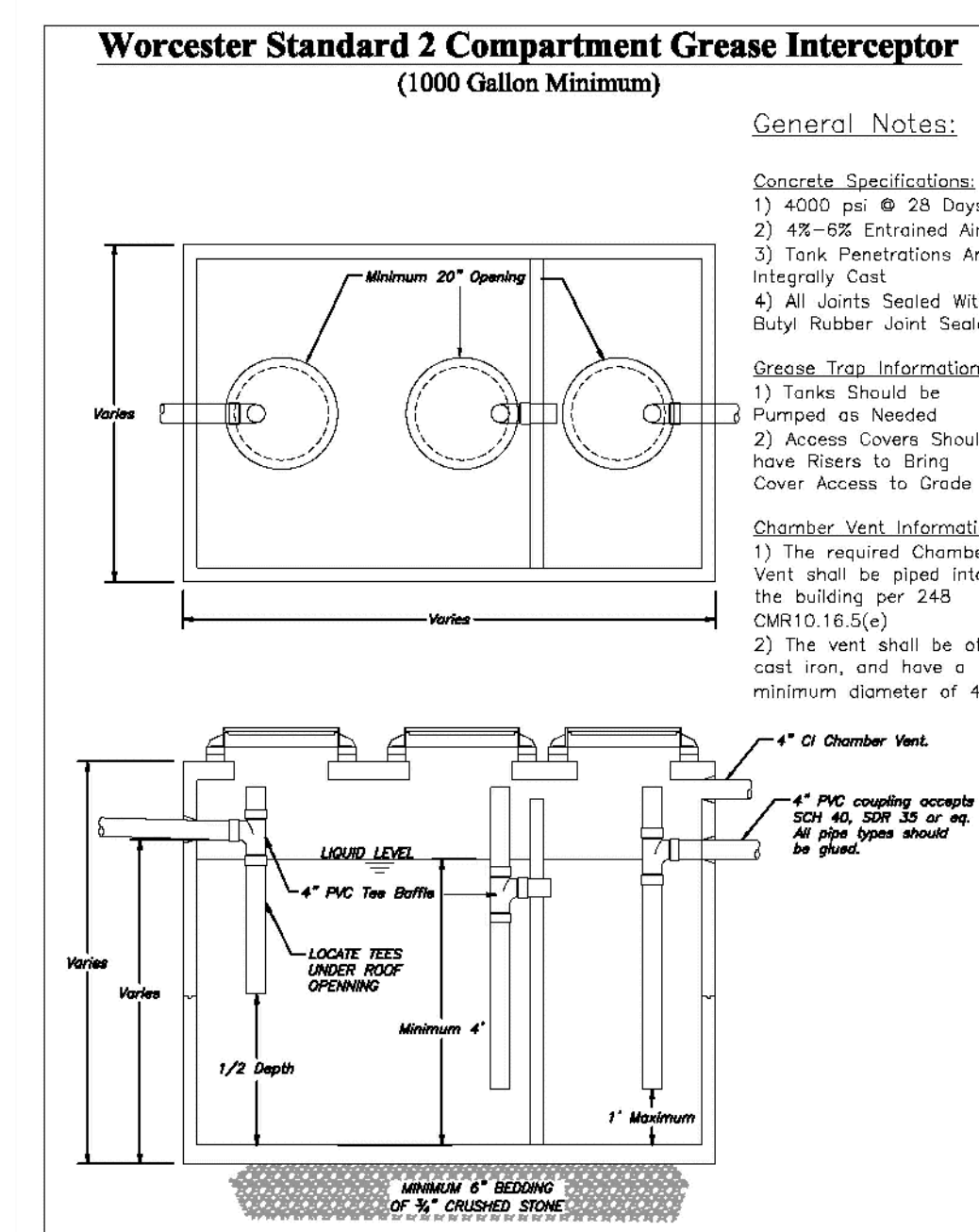
SANITARY MANHOLE FRAME AND COVER DETAIL
NOT TO SCALE



TYPICAL SEWER CLEANOUT DETAIL
NOT TO SCALE



RECLAIM TANK SYSTEM DETAIL
NOT TO SCALE



NOTE:
USE 1,500 GALLON GREASE TRAP.

Crossman Engineering
Rhode Island: 151 Cantoville Road, Warwick, RI 02886, Phone (401) 738-5660
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700
Email: cel@crossmaneng.com

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KEY PLAN

PROJECT TITLE:
PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:
1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

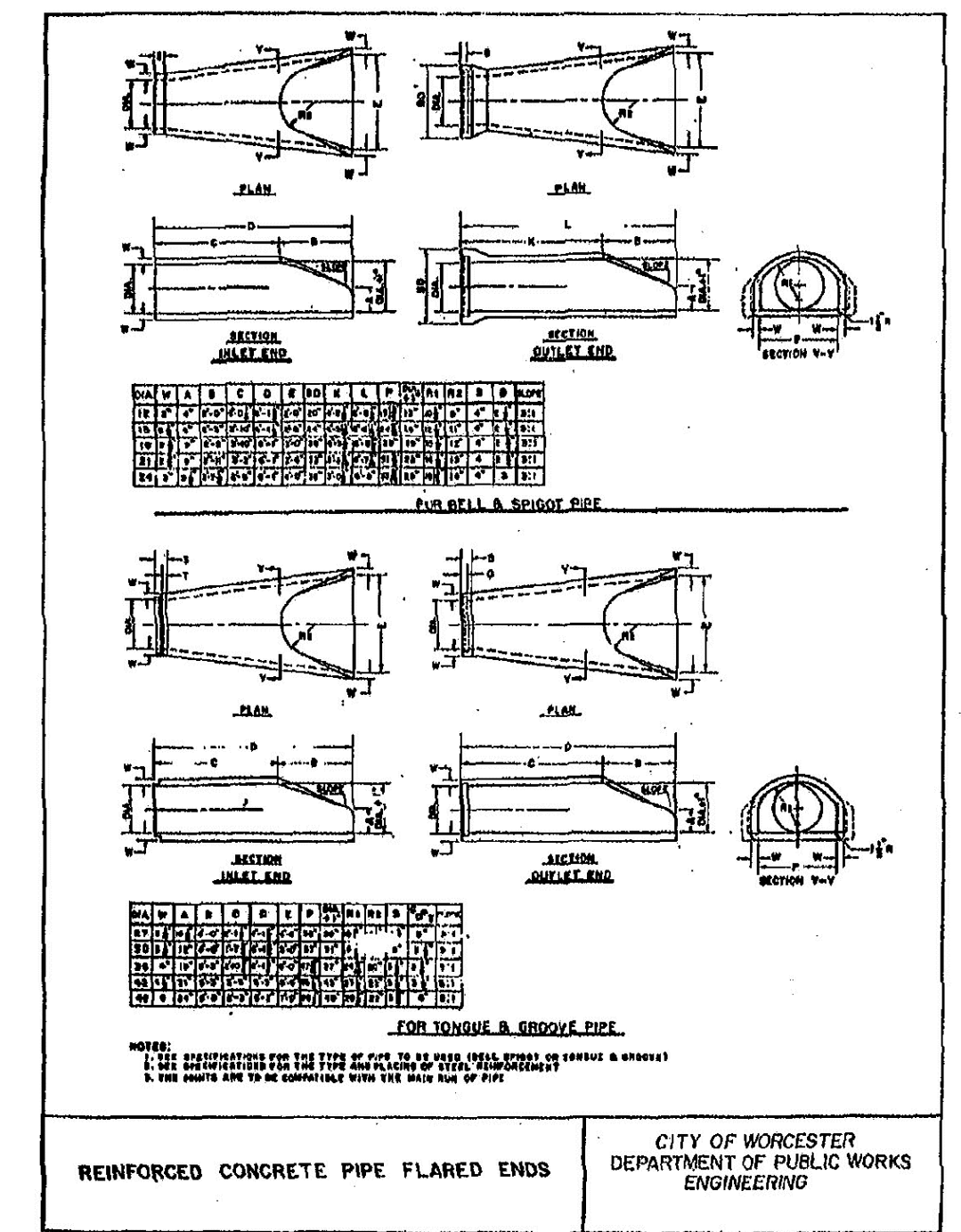
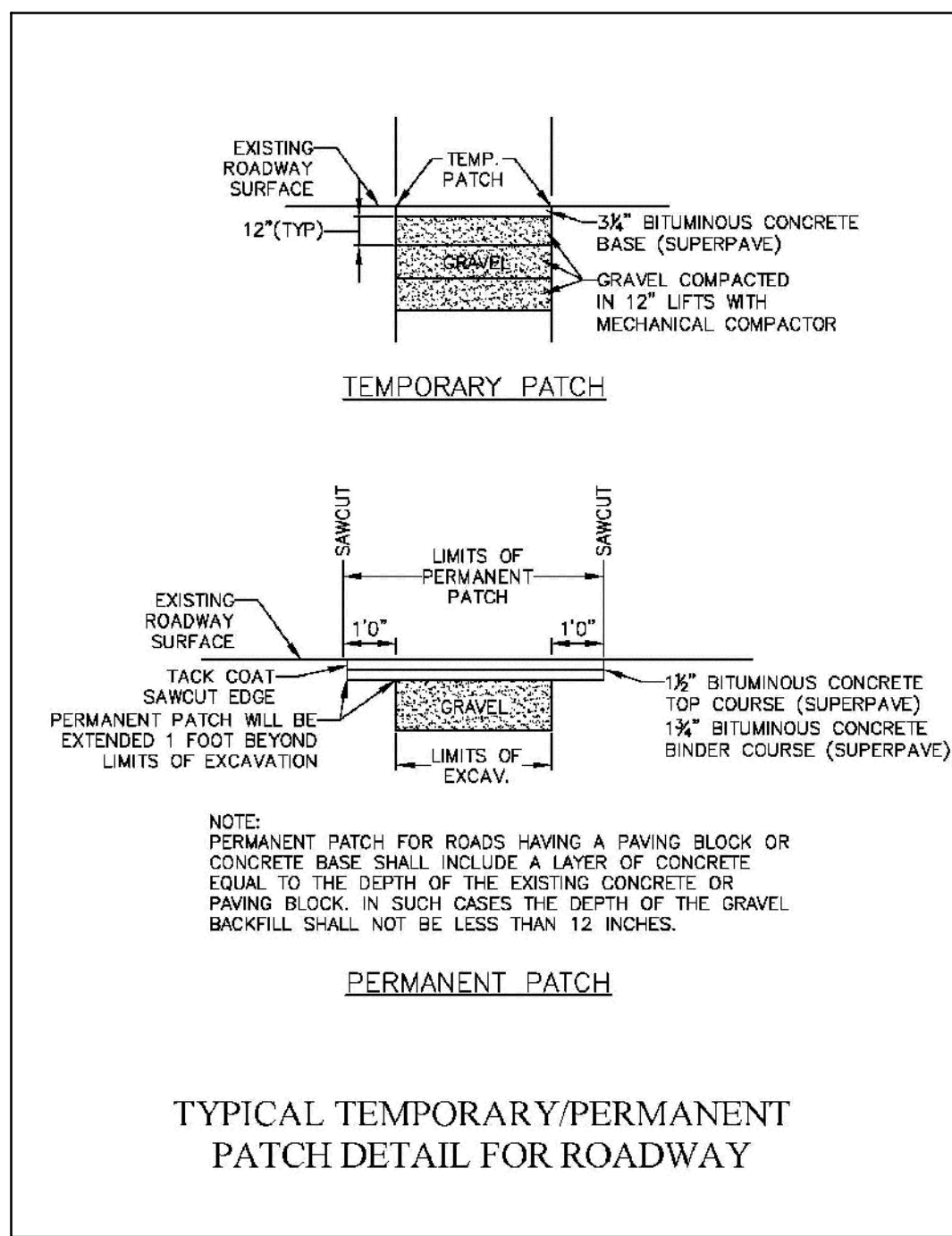
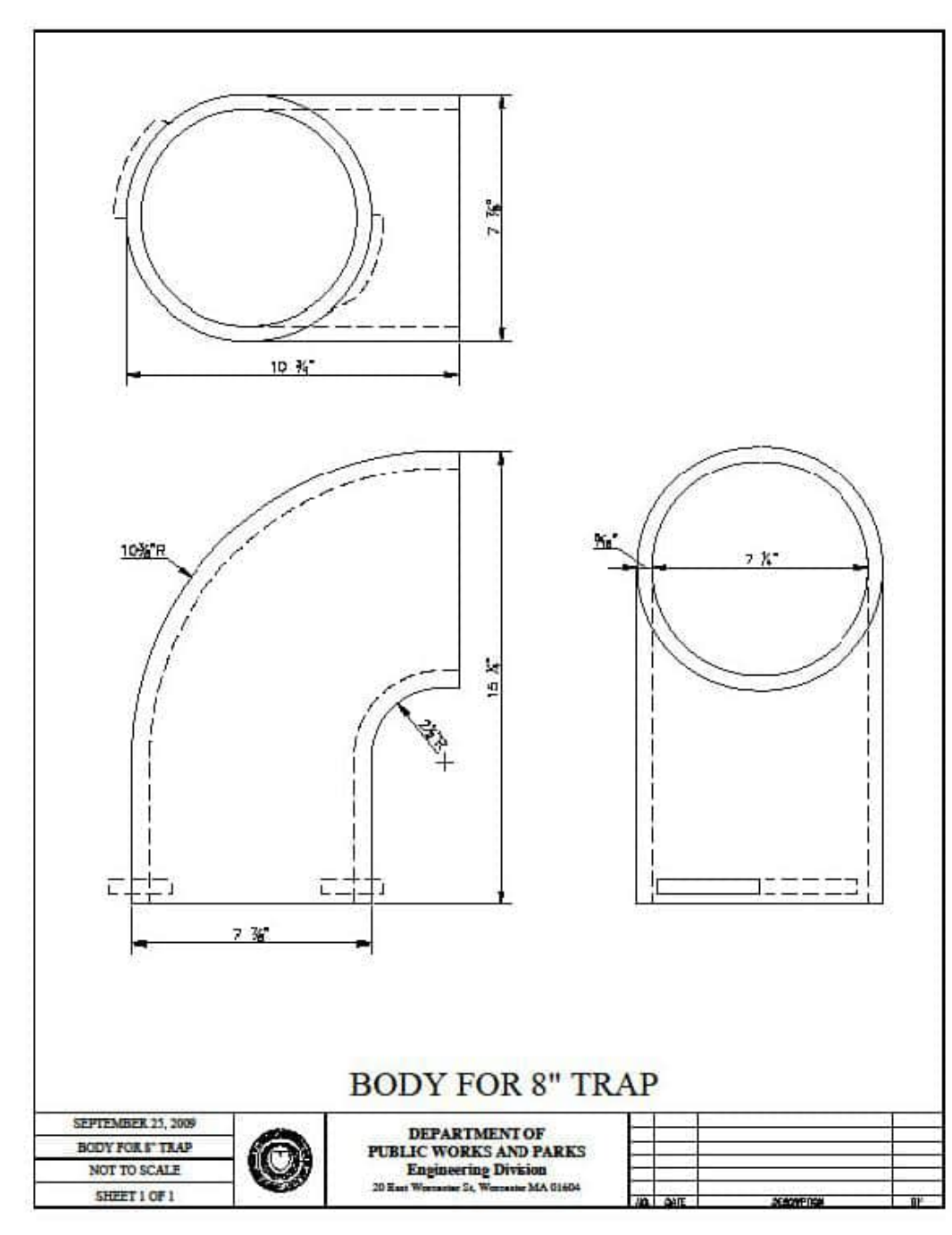
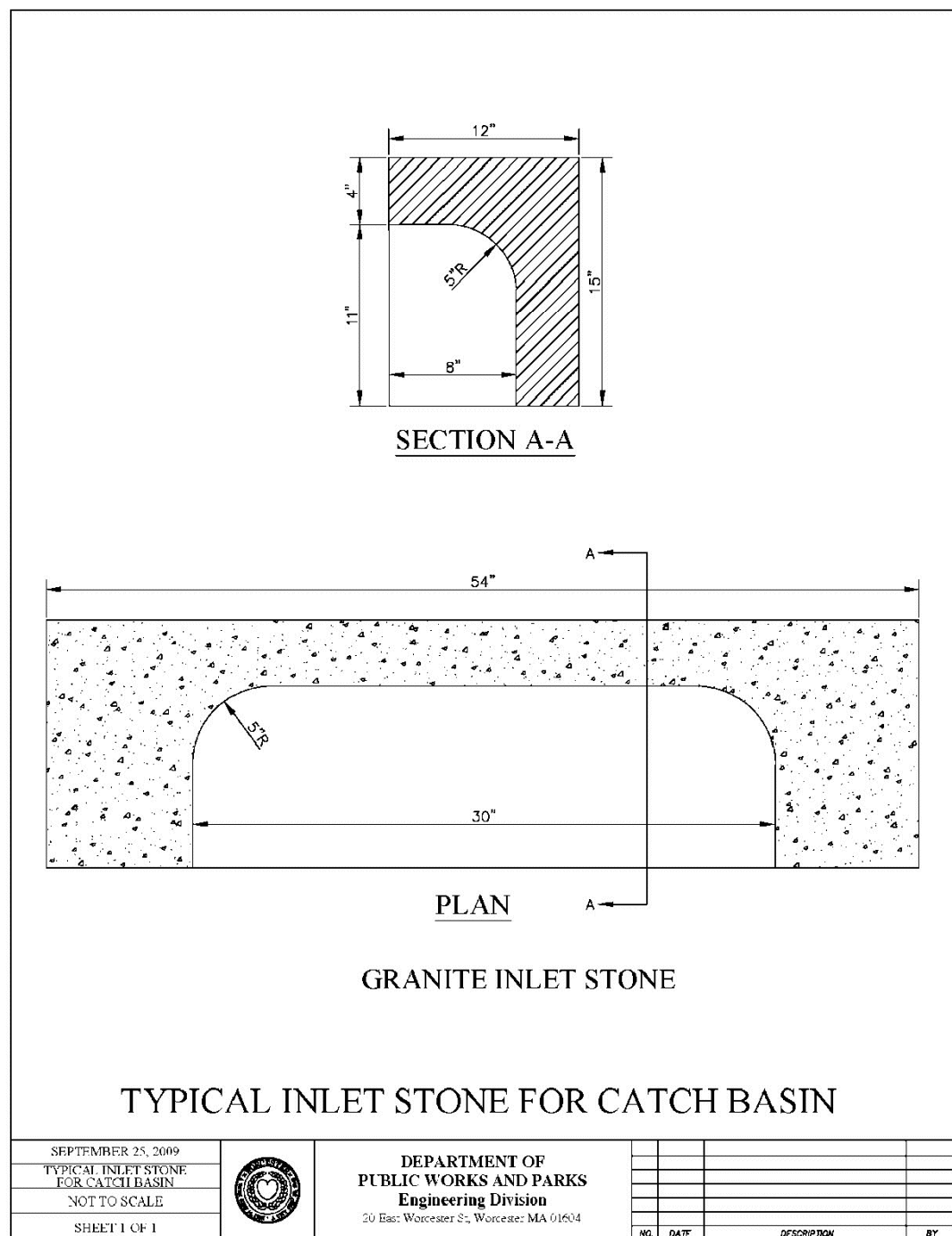
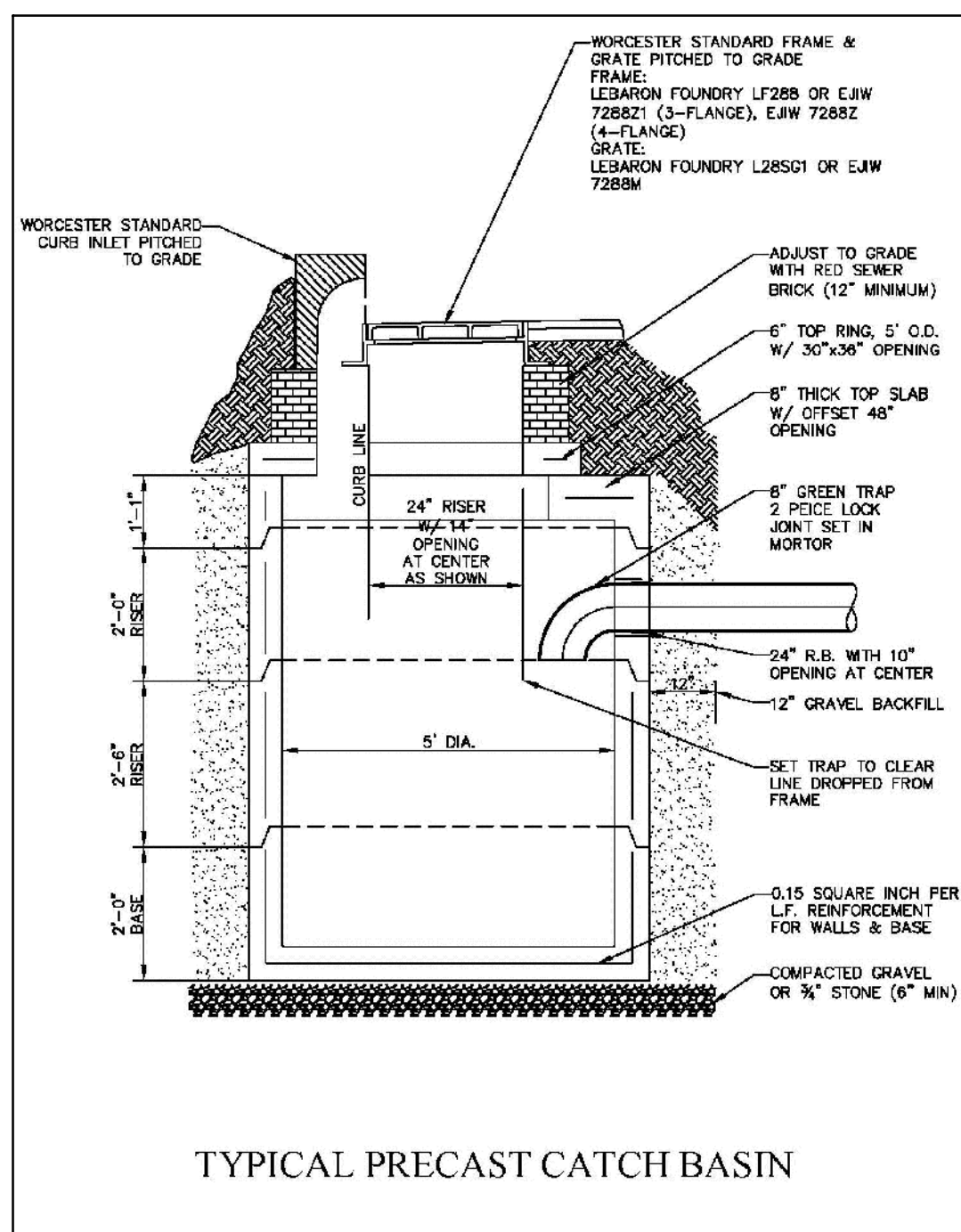
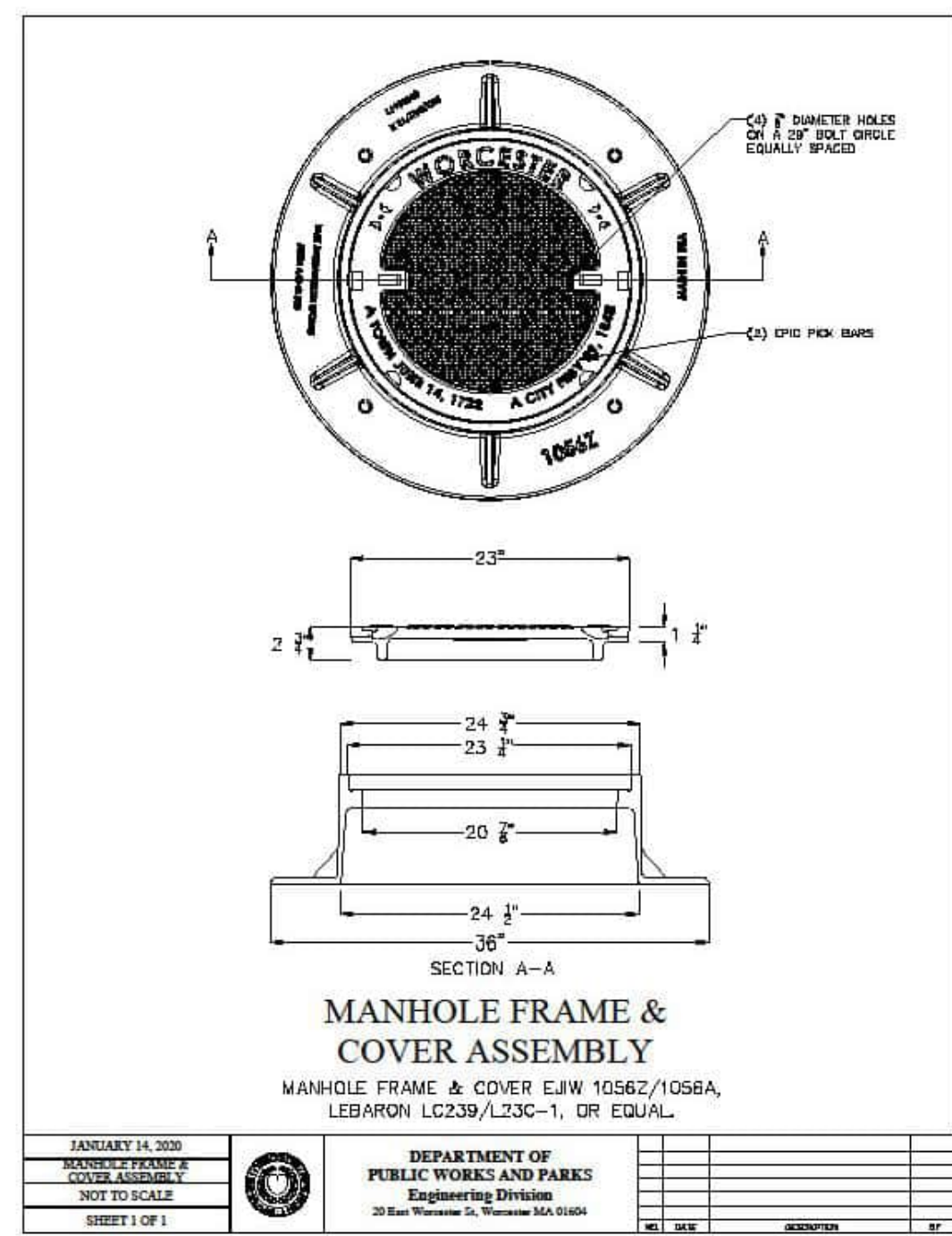
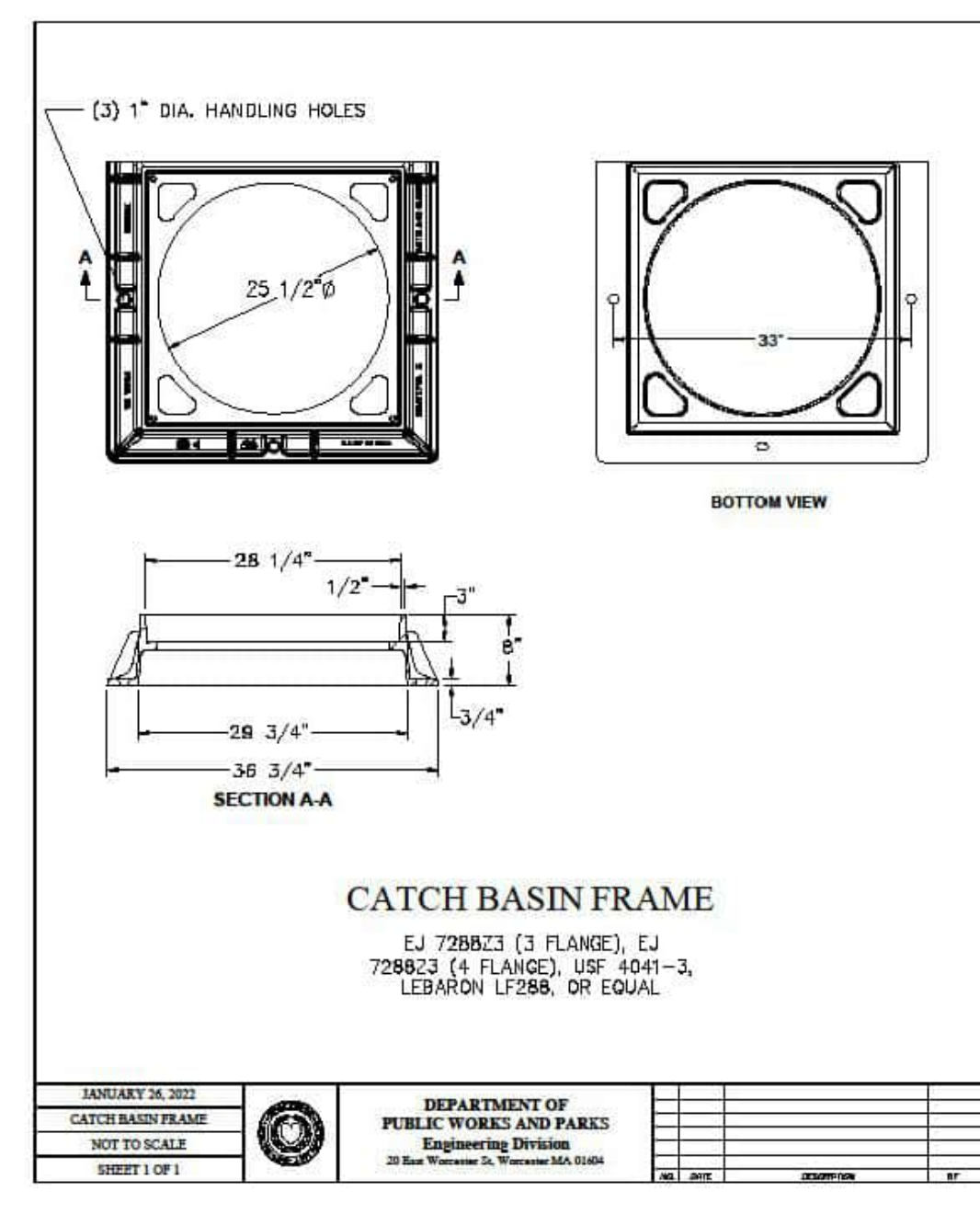
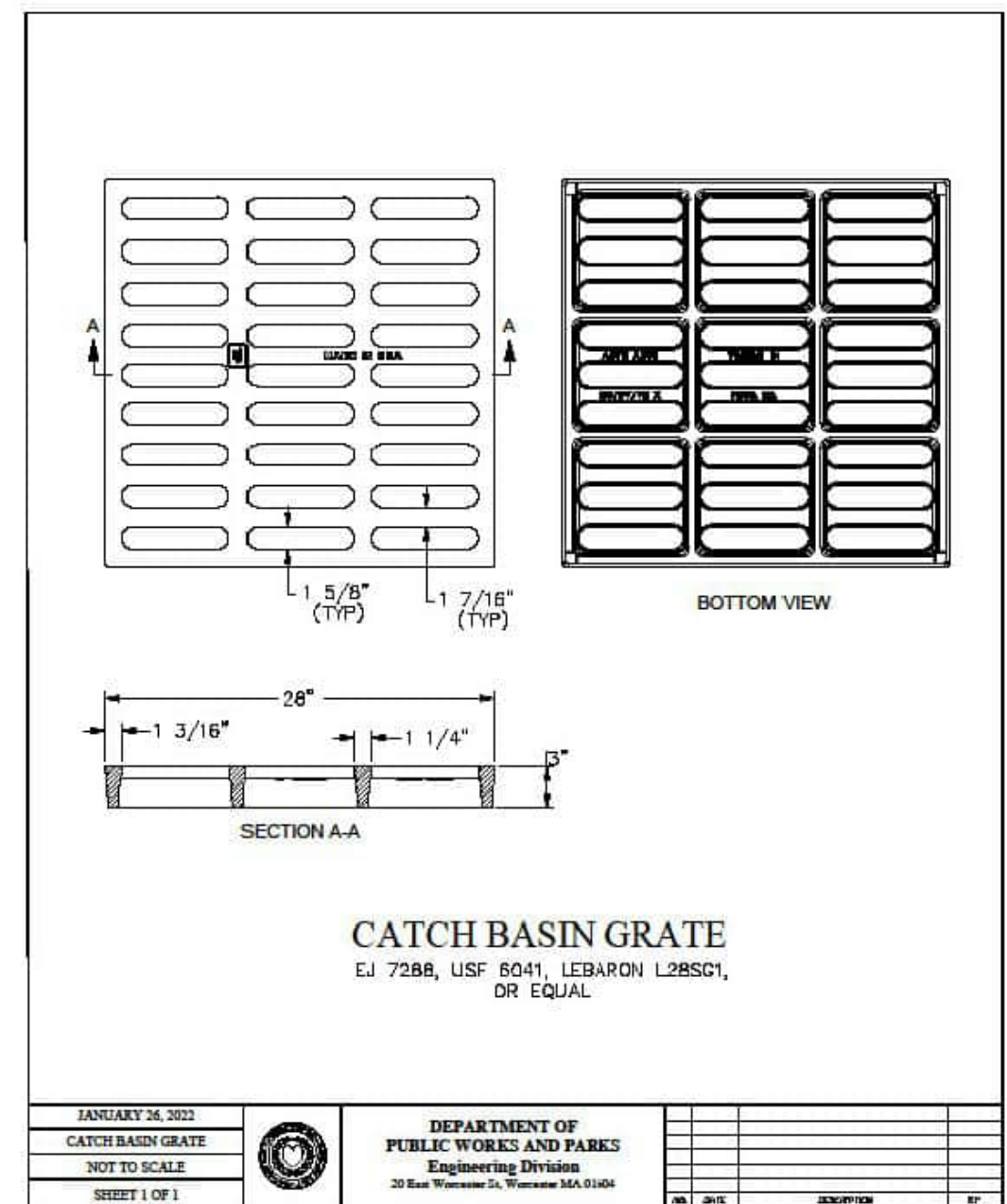
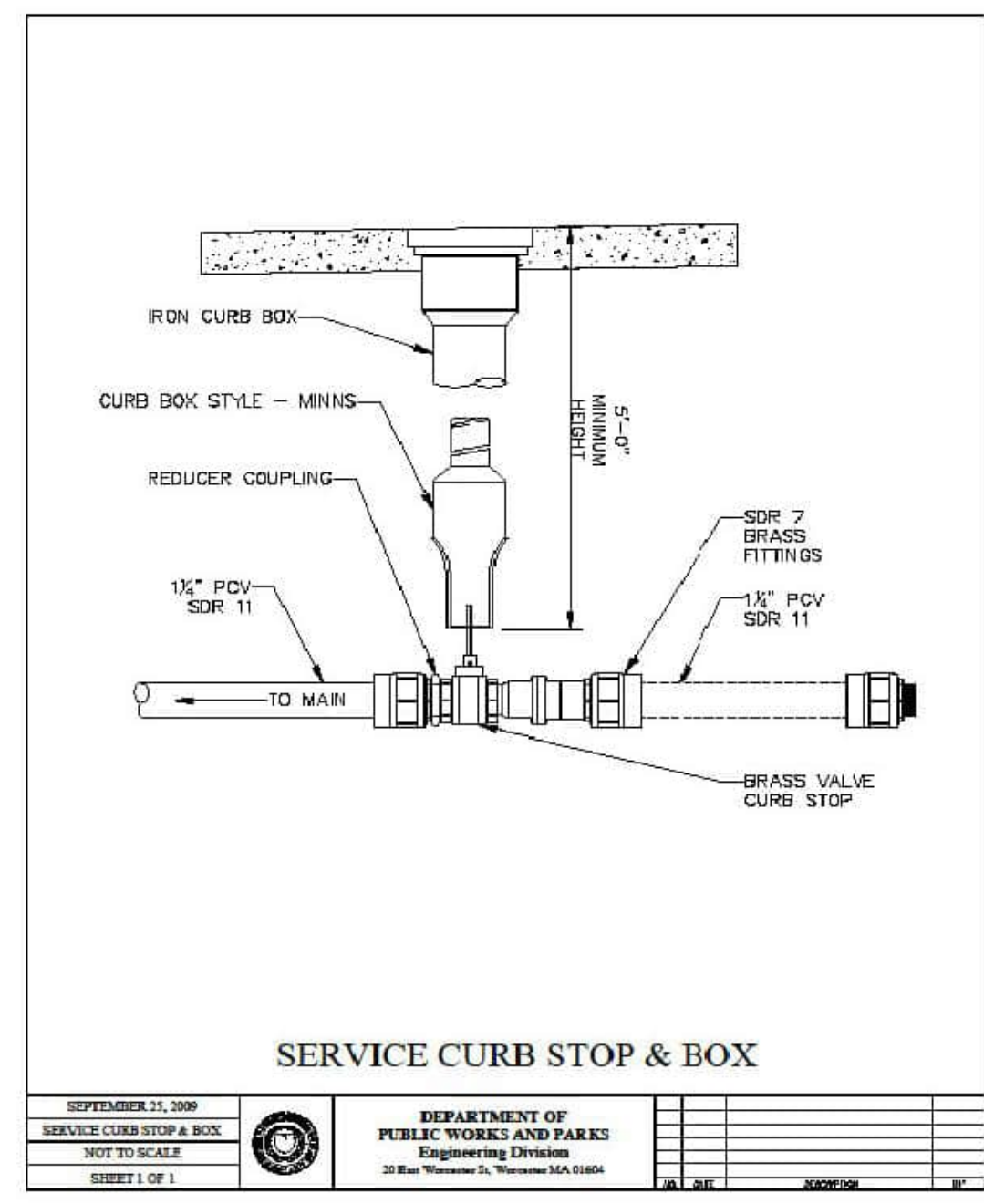
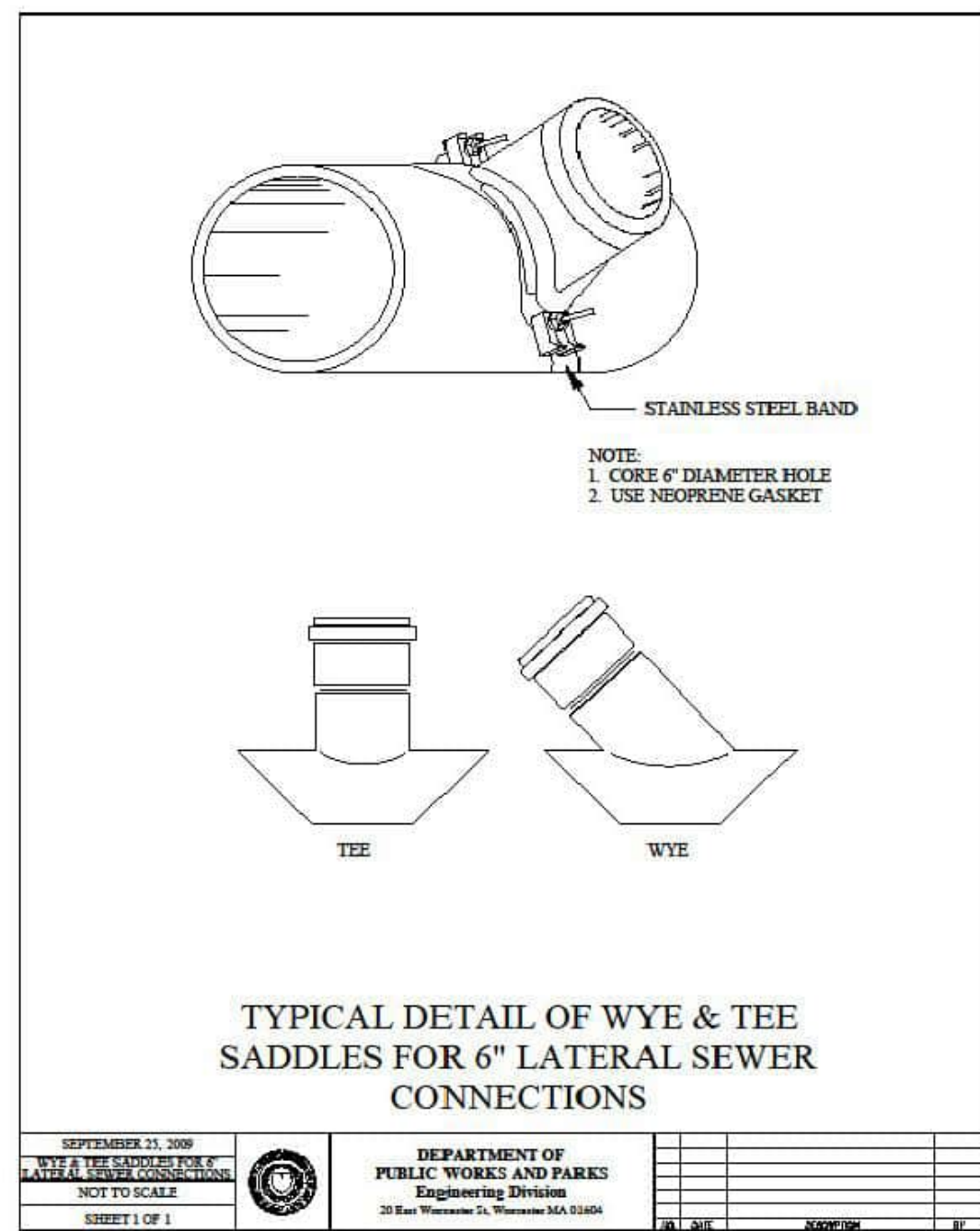
DRAWING TITLE:
MISCELLANEOUS
DETAIL PLAN No. 5

DATE: JUNE 2023 SCALE: AS SHOWN
DWG. NAME: M280-C13-DETAIL5-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C13
SHEET: 14 OF 21



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KEY PLAN

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PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA**

PREPARED FOR:
**1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023**

DRAWING TITLE:
**MISCELLANEOUS
DETAIL PLAN No. 6**

DATE: JUNE 2023 SCALE: AS SHOWN
DWC. NAME: M280-C14-DETAIL6-R3.dwg

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
C14
SHEET: 15 OF 21

LED AREA LIGHTS - (XGBM)

LUMINAIRE ORDERING INFORMATION

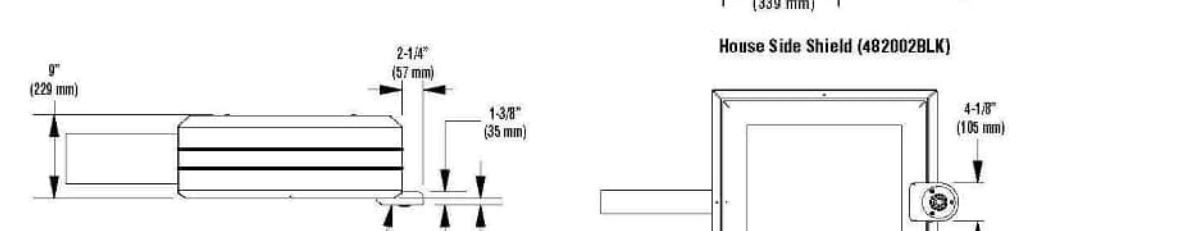
Profile	Distribution	Light Source	Size	Color Temperature	Input Voltage	Finish	Optional Controls	Optional Sensor/Options
5'-S	5'-S	LED	48" x 24"	3000K	120V/277V	Black	None	None
5'-S	5'-S	LED	48" x 24"	3000K	120V/277V	Black	None	None
5'-S	5'-S	LED	48" x 24"	3000K	120V/277V	Black	None	None

LUMINAIRE EPA CHART - XGBM	ACCESSORY ORDERING INFORMATION*	(Accessories are sold individually)	Order Number
5'-S	48" x 24" LED	48" x 24" LED	48200-01
5'-S	48" x 24" LED	48" x 24" LED	48200-02
5'-S	48" x 24" LED	48" x 24" LED	48200-03

FOOTNOTES:
 1. Use with optional wiring system.
 2. For wireless controls, see wireless control system, DIM or BLS system.
 3. For wireless controls, see wireless control system, DIM or BLS system.
 4. Not compatible with DIM or BLS system.
 5. Not compatible with wireless control system, DIM or BLS system.

FEATURES & SPECIFICATIONS

Performance	Dimensions
Beam Spread: 400K Efficiency: 130.2 Wallage: 41.20	Height: 14.5" Width: 48" Depth: 24"



Project Name: _____ Feature Type: _____
 Catalog #: _____

ALUMINUM SQUARE POLES (SOFT CORNER)

POLE ORDERING INFORMATION

Typical Order Example:	4SQB3	A125	14	S	BLK
------------------------	-------	------	----	---	-----

Pole Series	Material	Height	Mounting	Pole	Options
4SQB3 - 3' Reduced Drilling Pattern	A125 - 120 Aluminum	12'	S - Single Parallel	BLK - Black	RP - Feature Offset Provision
4SQB3 - 3' Reduced Drilling Pattern	A125 - 120 Aluminum	12'	D180 - Double	WH - White	RP - Feature Offset Provision
4SQB3 - 3' Traditional Drilling Pattern	A125 - 120 Aluminum	12'	T90 - Triple	GR - Green	LAD - Level Access Drills
4SQB3 - 3' Traditional Drilling Pattern	A125 - 120 Aluminum	12'	Q90 - Quad	MT - Metallic	LAD - Level Access Drills

FOOTNOTES:
 1. See Area Lighting Schedule - Division and 305330000 Area Lighting Schedule pages for Internal Slip-Rite brackets.
 2. Pole heights will have a 2" tolerance.
 3. Pole heights include standard 4" x 4" base plate.
 4. 120' mounting configuration not available.
 5. Specify location in feet above base of pole and pole color.
 Minimum height is 10' from standard handrail.

ACCESSORY ORDERING INFORMATION (Accessories are sold individually)

Description	Order Number
48" x 24" LED	48200-01
48" x 24" LED	48200-02
48" x 24" LED	48200-03

BOLT CIRCLE

4" (120mm) Spacing	5" (127mm) Spacing	6" (152mm) Spacing
4" (120mm) Spacing	5" (127mm) Spacing	6" (152mm) Spacing
4" (120mm) Spacing	5" (127mm) Spacing	6" (152mm) Spacing

EPA INFORMATION

All poles are painted to meet the EPA requirements. EPA has determined that the paint used on these poles is safe for use. The paint used on these poles is safe for use. The paint used on these poles is safe for use.

Symbol	Qty	Label	Manufacture	Description
SL-1	6	SL-1	LSI Lighting	XGBM-HSS-FT-LED-LW-CW-UE-BLK / 14 FT MTG - SINGLE
WL-1	6	WL-1	LSI Lighting	MCOWP-43K-45K-BZ-PC120 / 15 FT MTG

NOTE: FIXTURES MUST BE DARK SKY COMPLIANT

Project Name: _____ Feature Type: _____
 Catalog #: _____

LIGHTING NOTES

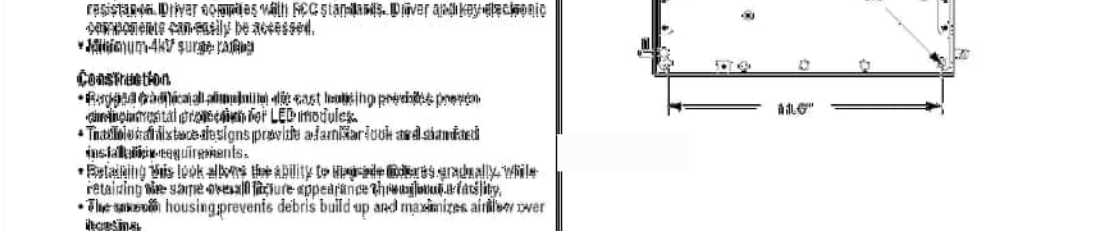
- ALL FIXTURES THAT ARE 3,000K OR WARMER MUST HAVE FULL CUT-OFF TO LIMIT SPILLOVER
- ALL FIXTURES MUST BE "DARK SKY COMPLIANT".



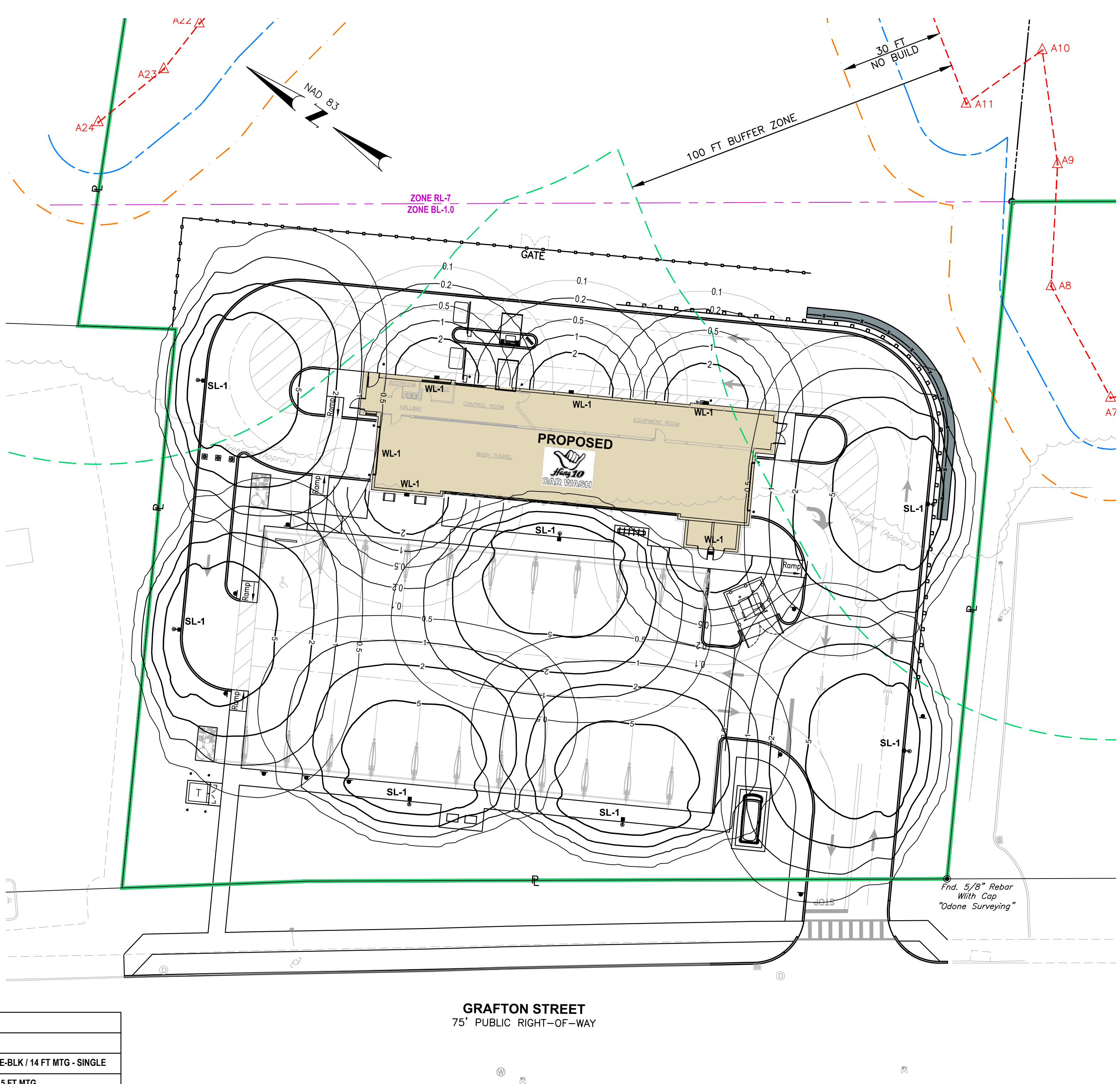
MCOWP43W
 43 watt LED Medium Cut-Off Wall Pack

LSI Wall Packs 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.

Performance	Dimensions
Beam Spread: 400K Efficiency: 130.2 Wallage: 41.20	Height: 14.5" Width: 48" Depth: 24"

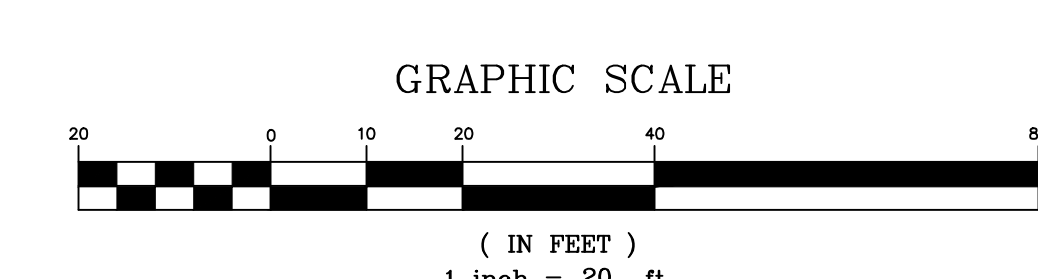


Project Name: _____ Feature Type: _____
 Catalog #: _____



GRAFTON STREET
 75' PUBLIC RIGHT-OF-WAY

APN 34-025-003+5



Crossman Engineering
 Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-6660
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone (508) 695-1700
 Email: cel@crossmaneng.com

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 1380 SOLDIERS FIELD ROAD
 BOSTON, MA 02135-1023

DRAWING TITLE:

SITE LIGHTING PLAN

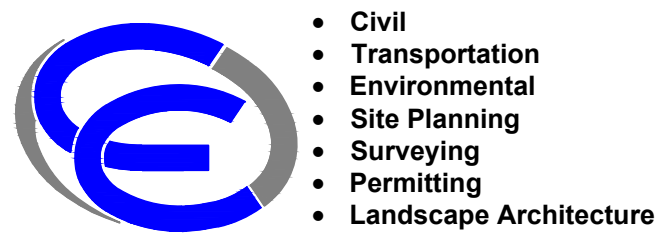
DATE: JUNE 2023 SCALE: 1"=20'
 DWG. NAME: M280-E01-LIGHT-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER

E1
 SHEET: 16 OF 21



Crossman Engineering

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KEY PLAN

PROJECT TITLE:

PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA

PREPARED FOR:

1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023

DRAWING TITLE:

LANDSCAPE PLAN

DATE: JUNE 2023 SCALE: 1"=20'

DWC. NAME: M280-L01-LAND-R3.dwg

REVISIONS

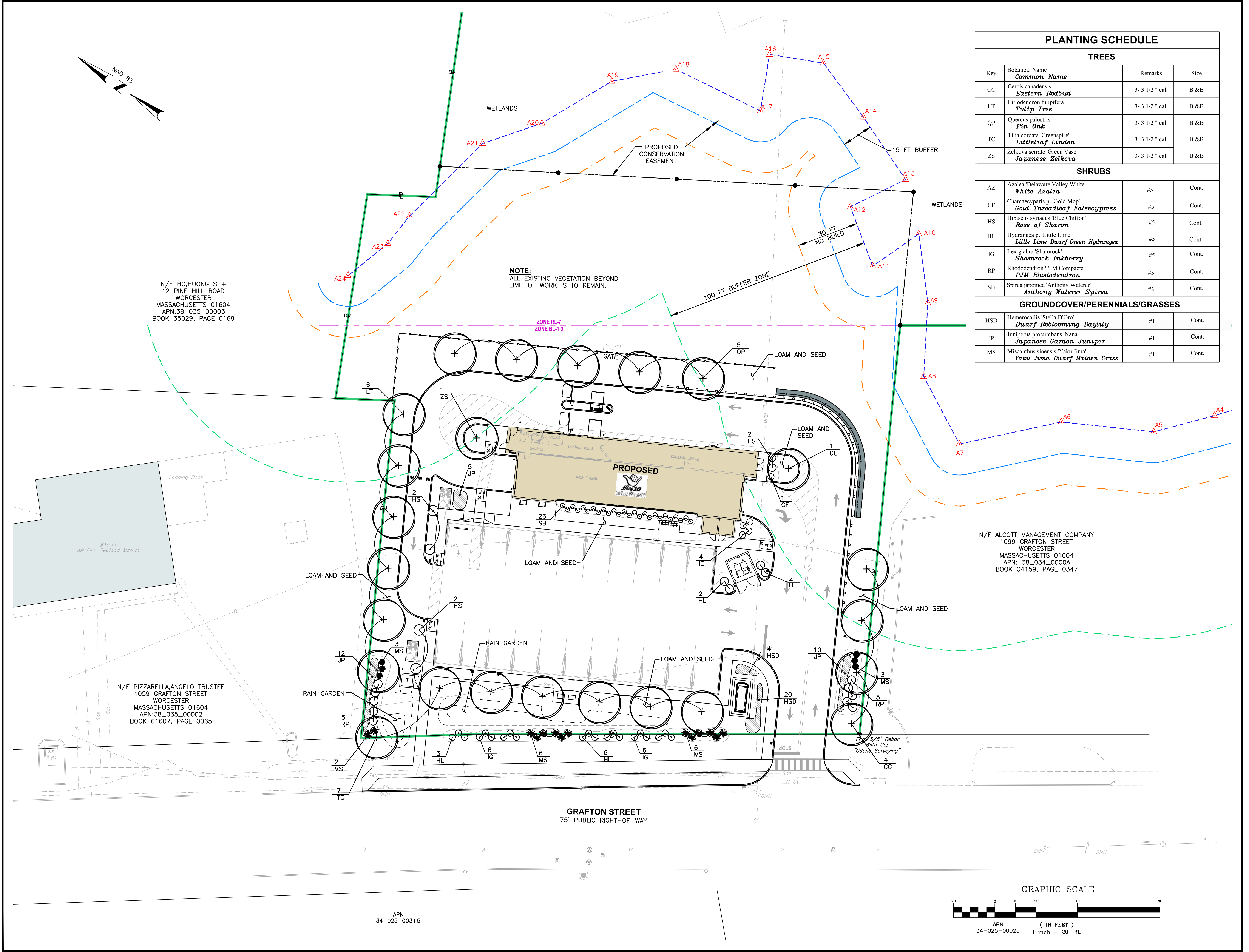
NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER/PERCONNECTION	01/25/24

DRAWING NUMBER

L1

SHEET: 17 OF 21

PLANTING SCHEDULE			
TREES			
Key	Botanical Name <i>Common Name</i>	Remarks	Size
CC	<i>Cercis canadensis</i> Eastern Redbud	3- 3 1/2" cal.	B & B
LT	<i>Liriodendron tulipifera</i> Tulip Tree	3- 3 1/2" cal.	B & B
QP	<i>Quercus palustris</i> Pin Oak	3- 3 1/2" cal.	B & B
TC	<i>Tilia cordata</i> 'Greenspire' Littleleaf Linden	3- 3 1/2" cal.	B & B
ZS	<i>Zelkova serrata</i> 'Green Vase' Japanese Zelkova	3- 3 1/2" cal.	B & B
SHRUBS			
AZ	<i>Azalea</i> 'Delaware Valley White' White Azalea	#5	Cont.
CF	<i>Chamaecyparis</i> p. 'Gold Mop' Cold Threadleaf Falsecypress	#5	Cont.
HS	<i>Hibiscus syriacus</i> 'Blue Chiffon' Rose of Sharon	#5	Cont.
HL	<i>Hydrangea</i> p. 'Little Lime' Little Lime Dwarf Green Hydrangea	#5	Cont.
IG	<i>Ilex glabra</i> 'Shamrock' Shamrock Inkberry	#5	Cont.
RP	<i>Rhododendron</i> 'PJM Compacta' PJM Rhododendron	#5	Cont.
SB	<i>Spirea japonica</i> 'Anthony Waterer' Anthony Waterer Spirea	#3	Cont.
GROUND COVER/PERENNIALS/GRASSES			
HSD	<i>Hemerocallis</i> 'Stella D'Oro' Dwarf Reblooming Daylily	#1	Cont.
JP	<i>Juniperus procumbens</i> 'Nana' Japanese Garden Juniper	#1	Cont.
MS	<i>Miscanthus sinensis</i> 'Yaku Jima' Yaku Jima Dwarf Maiden Grass	#1	Cont.



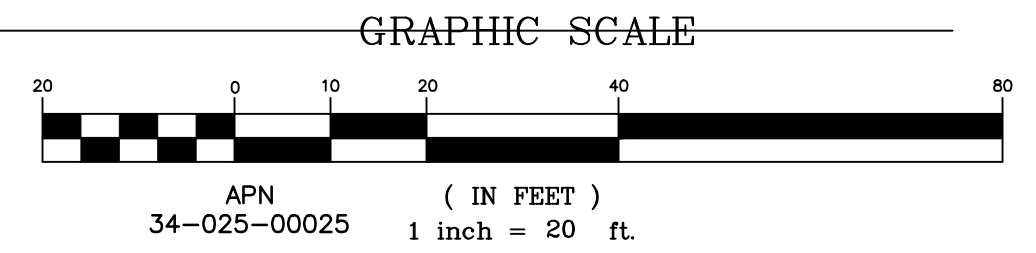
N/F HO, HUONG S +
 12 PINE HILL ROAD
 WORCESTER
 MASSACHUSETTS 01604
 APN:38_035_00003
 BOOK 35029, PAGE 0169

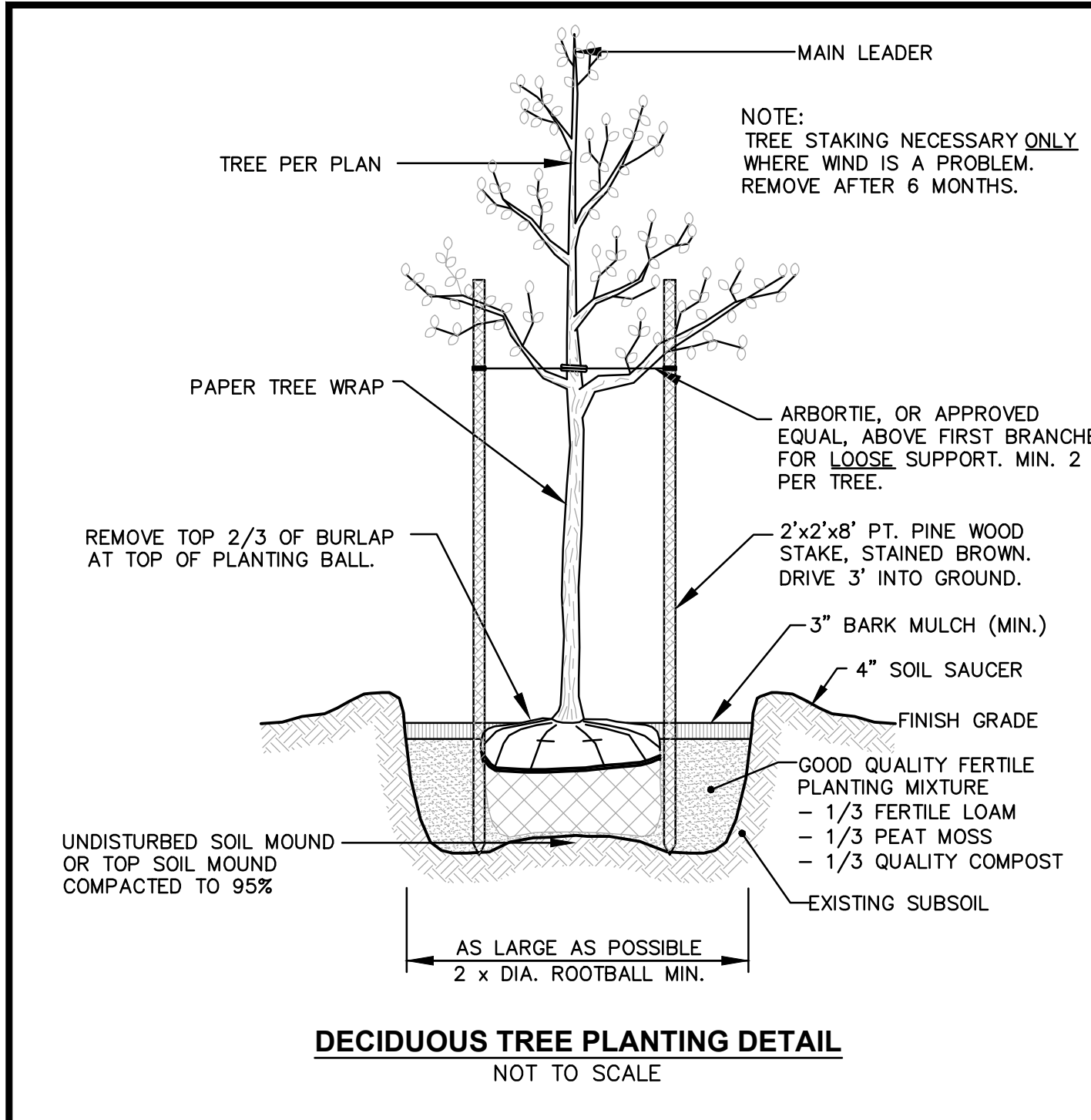
NOTE:
 ALL EXISTING VEGETATION BEYOND
 LIMIT OF WORK IS TO REMAIN.

N/F ALCOTT MANAGEMENT COMPANY
 1099 GRAFTON STREET
 WORCESTER
 MASSACHUSETTS 01604
 APN: 38_034_0000A
 BOOK 04159, PAGE 0347

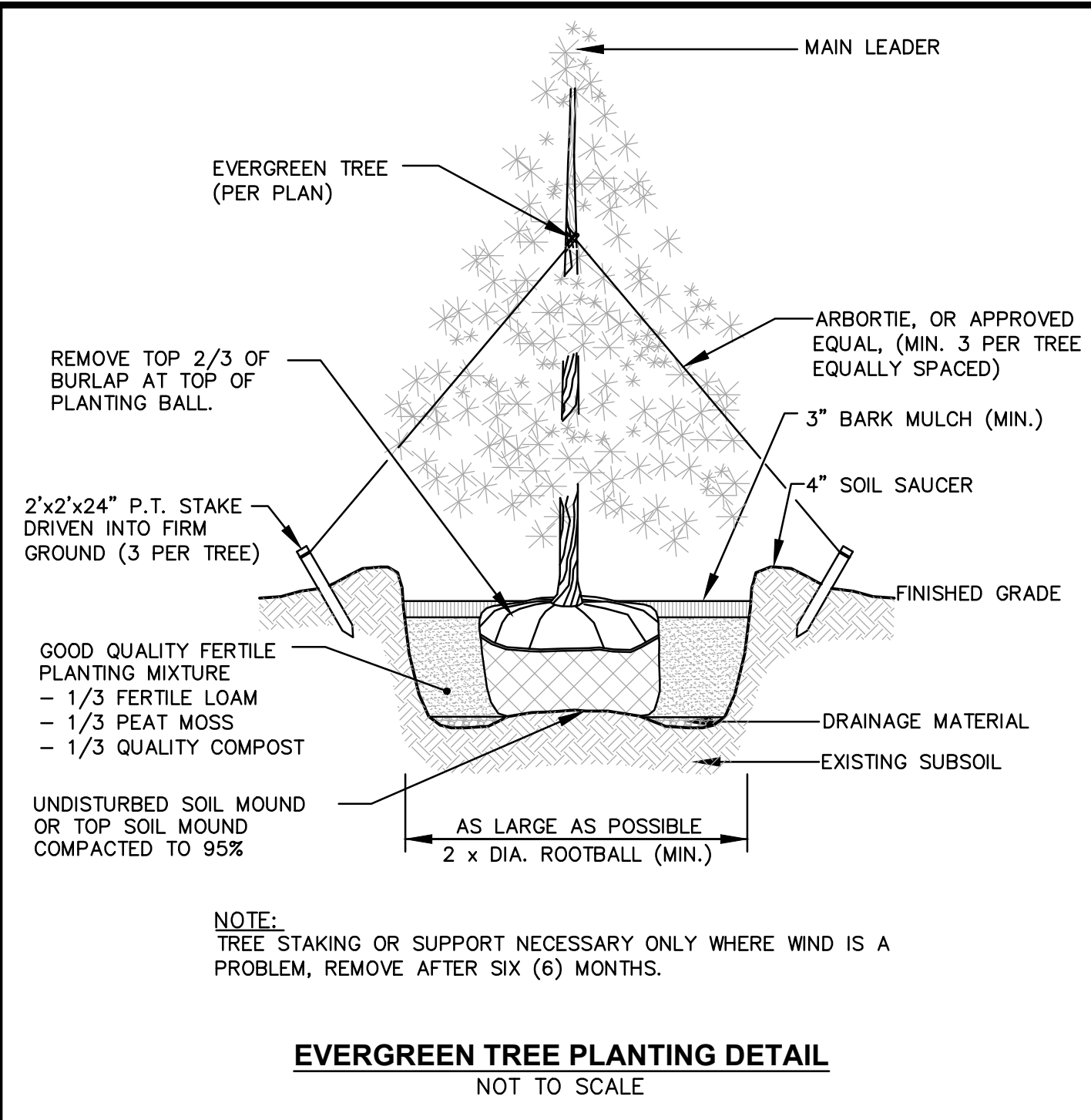
N/F PIZZARELLA, ANGELO TRUSTEE
 1059 GRAFTON STREET
 WORCESTER
 MASSACHUSETTS 01604
 APN:38_035_00002
 BOOK 61607, PAGE 0065

APN
 34-025-003+5

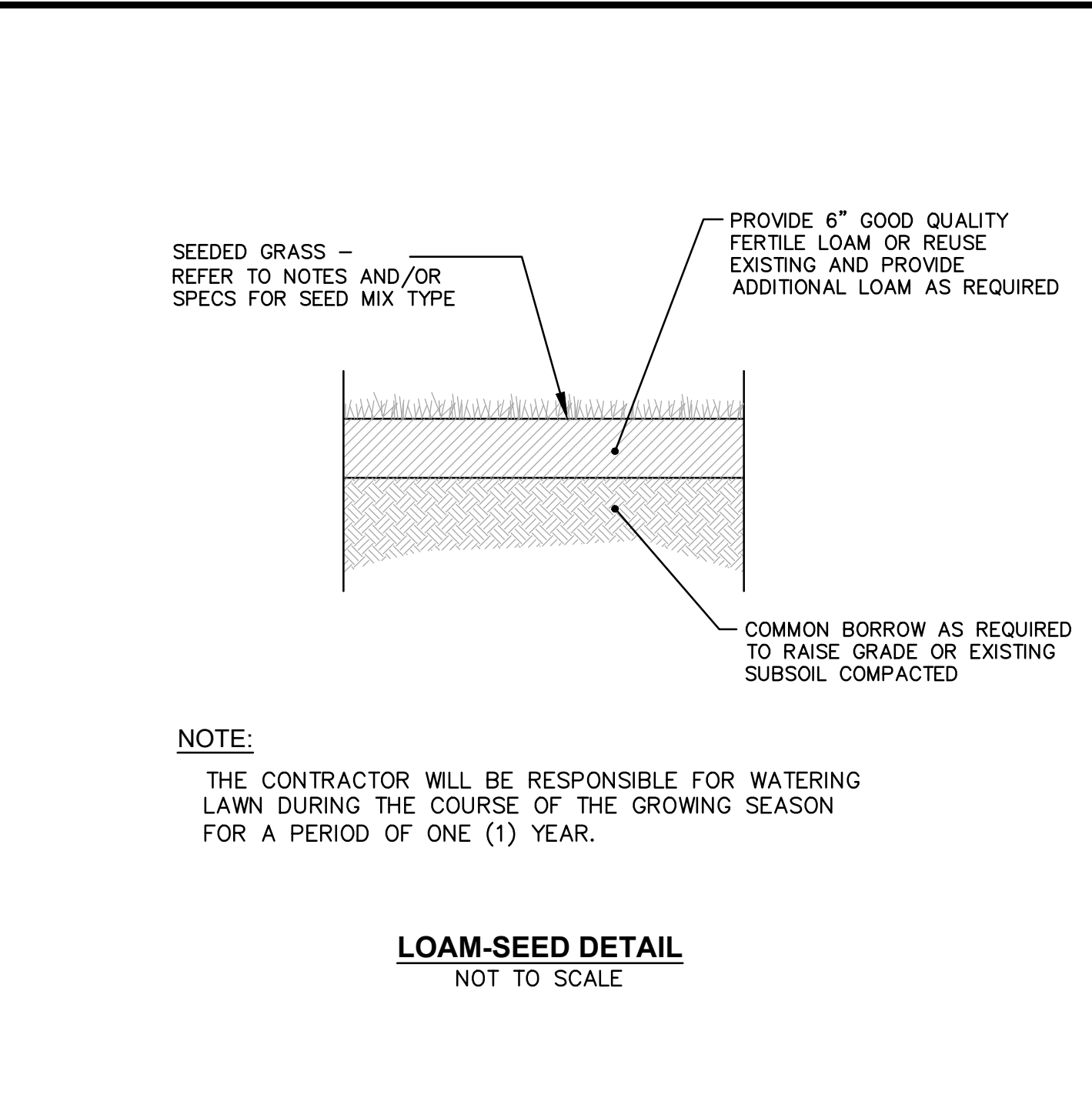




DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



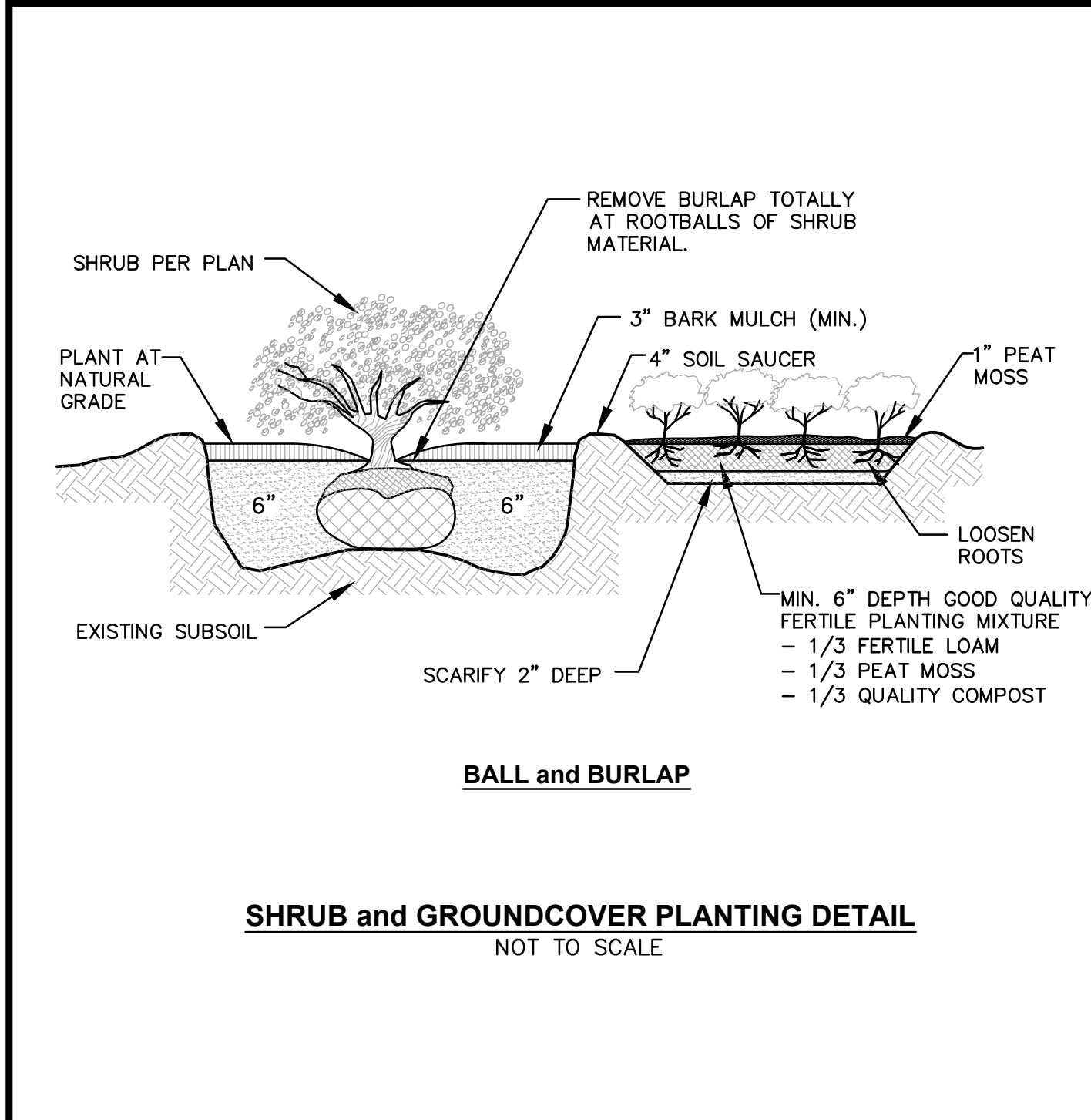
LOAM-SEED DETAIL
NOT TO SCALE

SEEDING NOTES

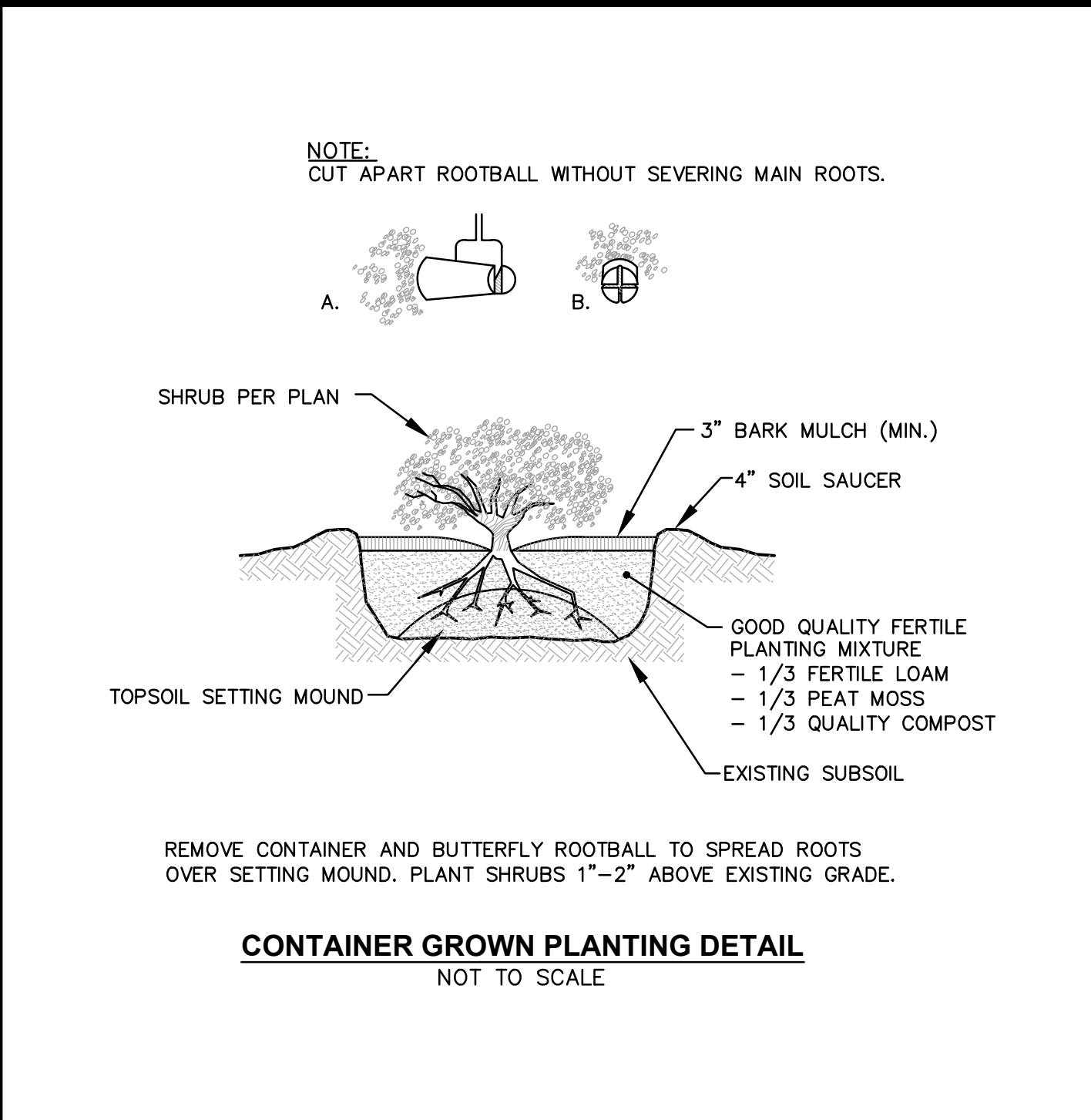
- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 6" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER 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.
- 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.
- APPLICATION OF SEED:
 - RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
 - 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
 - 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.
 - 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.
 - OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
 - REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
 - SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

SEED MIX No. 1		
ENDOPHYTE ENHANCED MIX (MOWED AREAS)		
TYPE	%	BY WEIGHT
IMPROVED PER. RYE	30%	
TURF TYPE TALL FESCUE	30%	
CHEWINGS FESCUE	30%	
KY. BLUEGRASS 98/85	10%	

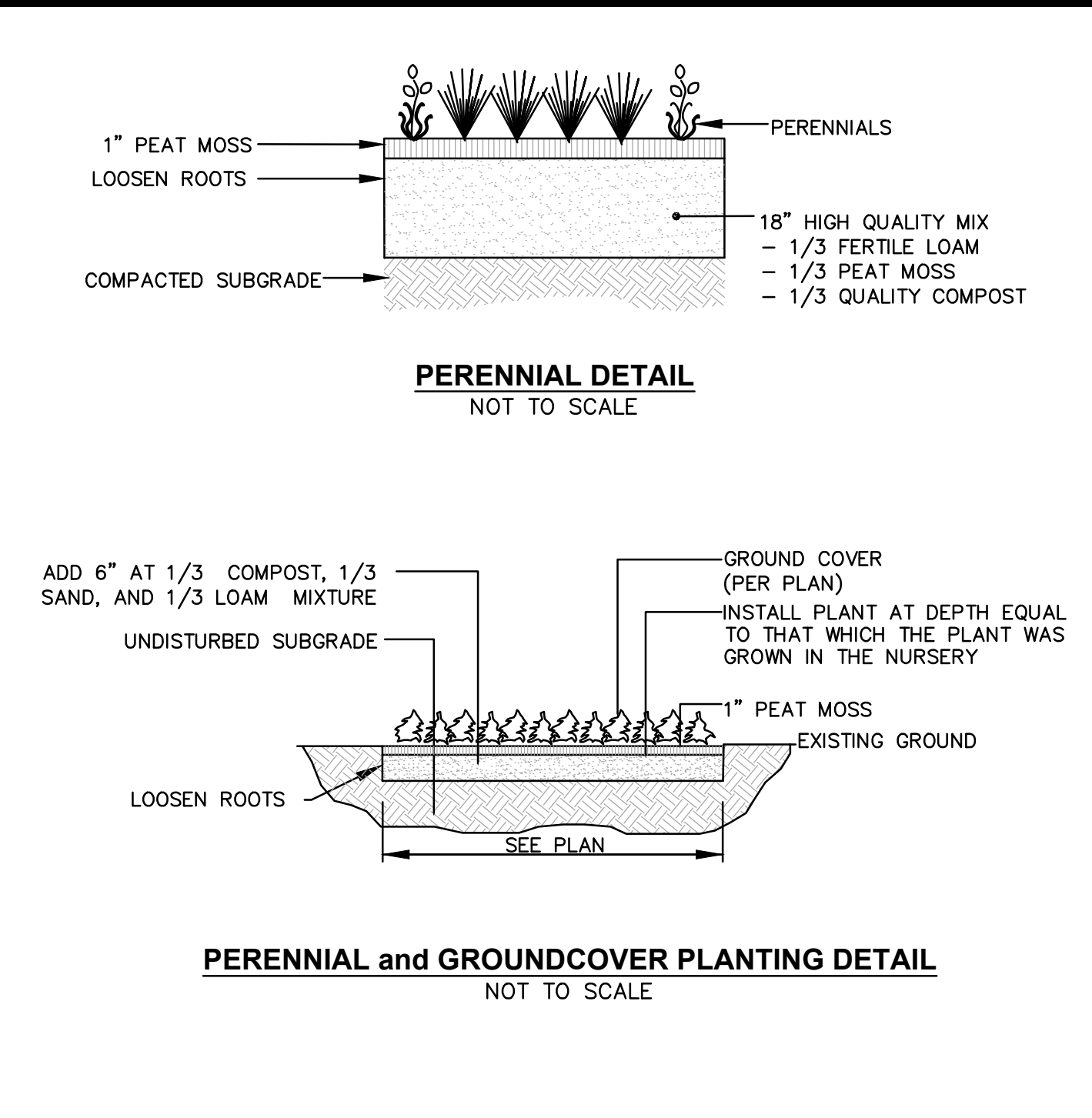
APPLICATION RATE = 200 lbs. / ACRE



SHRUB and GROUND COVER PLANTING DETAIL
NOT TO SCALE



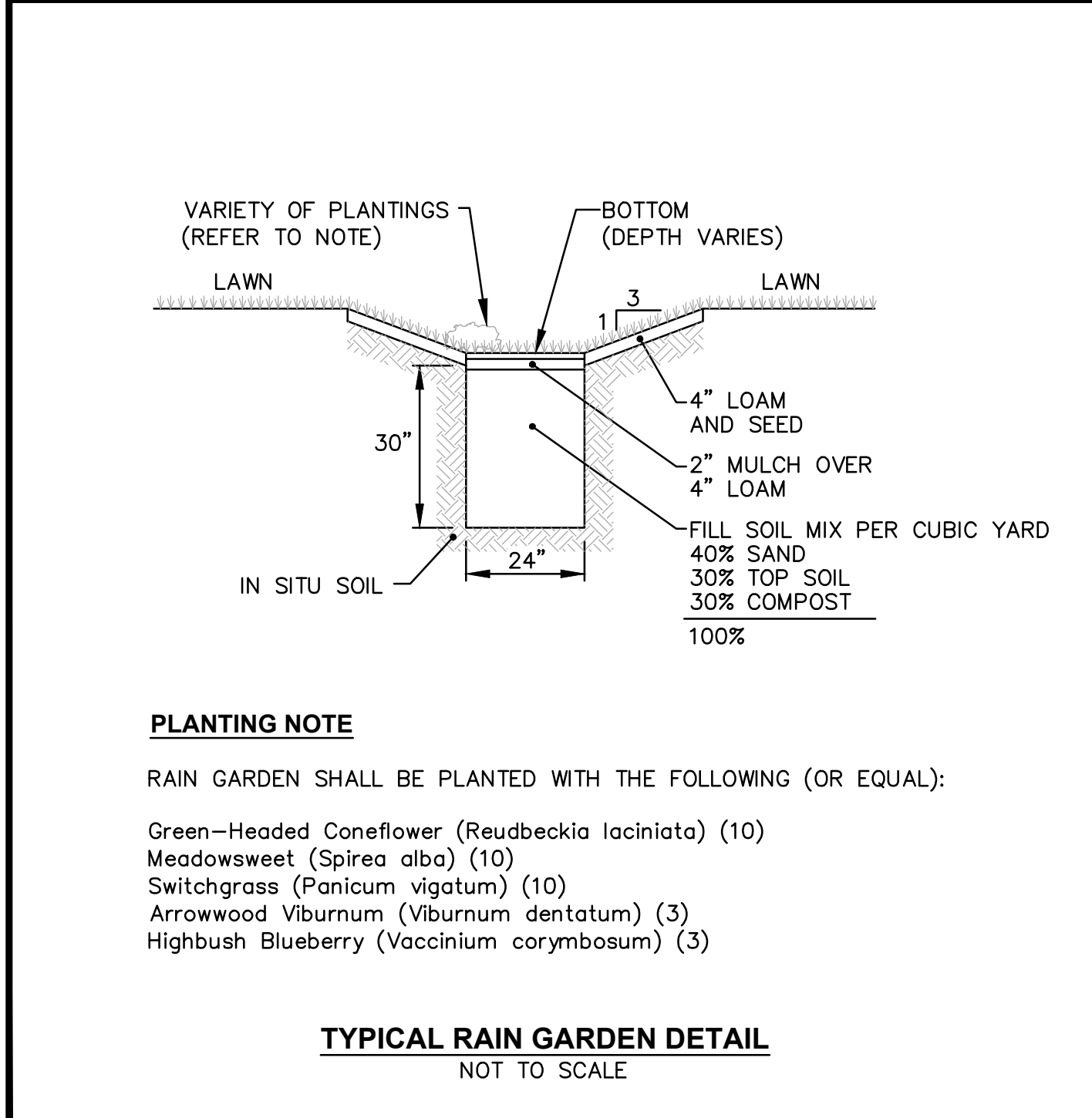
CONTAINER GROWN PLANTING DETAIL
NOT TO SCALE



PERENNIAL and GROUND COVER PLANTING DETAIL
NOT TO SCALE

LANDSCAPE CONSTRUCTION NOTES

- 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.
- 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.
- BIO-RETENTION 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).
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
- CALIPER MEASUREMENTS 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.
- ALL TREES SHALL BE A MINIMUM OF SEVEN (7) FEET ABOVE FINISHED GRADE WHEN TREES ARE LOCATED WITHIN VEHICULAR AND PEDESTRIAN TRAVEL WAYS.
- 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 FIRING OR TAMING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
- 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.
- 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.
- FERTILIZING:** FERTILIZE SHRUB BEDS WITH 10-10-10 FERTILIZER BROADCAST PER MANUFACTURER'S RATE. 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 APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF A SIX (6) WEEK PERIOD (WITH AVERAGE RAINFALL).
- LIMING:** ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
- MULCHING:** WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH TREFLAN HERBICIDE OR EQUIVALENT GRANULAR PRE-EMERGENT HERBICIDE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. COVER WITH 3" DEPTH OF NATURAL BROWN 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.
- 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.



TYPICAL RAIN GARDEN DETAIL
NOT TO SCALE

RAIN GARDEN MAINTENANCE

- RAIN GARDENS SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE RAIN GARDEN SHALL BE MONITORED AND MAINTAINED TO ENSURE PROPER FUNCTIONING, PLANT GROWTH AND SURVIVAL. PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING GROWING SEASON.
- SILT/SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDEN WHEN THE ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER PONDS ON THE SURFACE OF THE RAIN GARDEN FOR MORE THAN 48 HOURS. THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH SOIL MIXTURE AND MULCH.
- PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
- SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
- PERENNIAL PLANTS AND GROUND COVERS SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND COVER.

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KEY PLAN

PROJECT TITLE:
**PROPOSED CAR WASH
PLAT MAP 38,
BLOCK 35 LOT 2
ZONING DISTRICTS: BL-1.0 and RL-7
BUSINESS LIMITED and
SINGLE FAMILY DISTRICT
1059 GRAFTON STREET
WORCESTER, MA**

PREPARED FOR:
**1059 GRAFTON STREET, LLC
C/O BASS, DOHERTY & FINKS, P.C.
1380 SOLDIERS FIELD ROAD
BOSTON, MA 02135-1023**

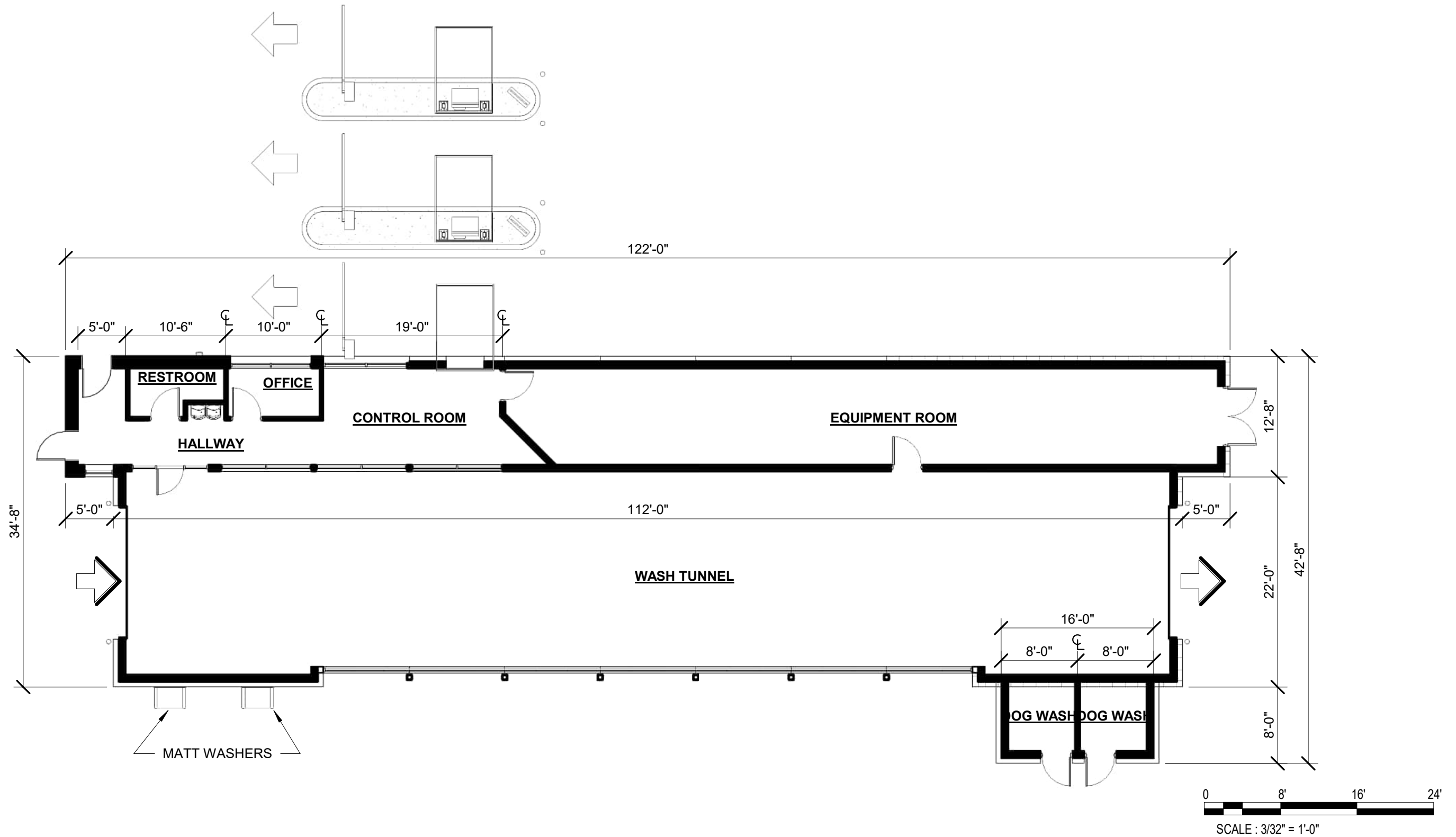
DRAWING TITLE:
**LANDSCAPE
DETAIL PLAN**

DATE: JUNE 2023 SCALE: NO SCALE
DWC. NAME: M280-L02-LNDET-R3.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PLANNING BOARD COMMENTS	08/01/23
2	CITY COMMENTS	08/18/23
3	SEWER CONNECTION	01/25/24

DRAWING NUMBER
L2
SHEET: 18 OF 21



HANG 10 - WORCESTER

CONCEPTUAL FLOOR PLAN

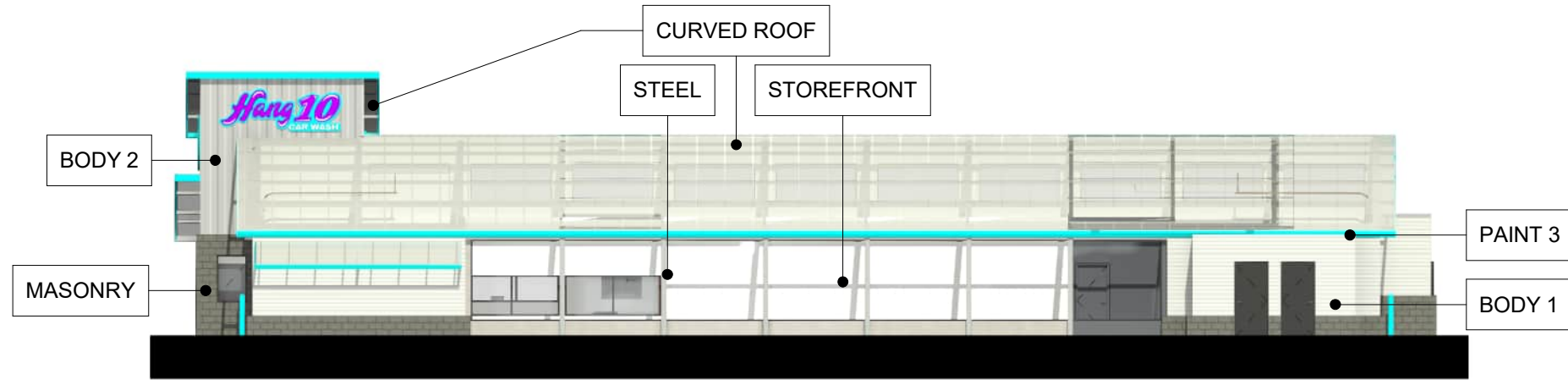
1059 GRAFTON ST
WORCESTER, MA

PROJECT NO.: PDP23.CWB.002
 DATE: 01/27/2023
 DRAWN BY: MMK
 CHECKED BY: JTK

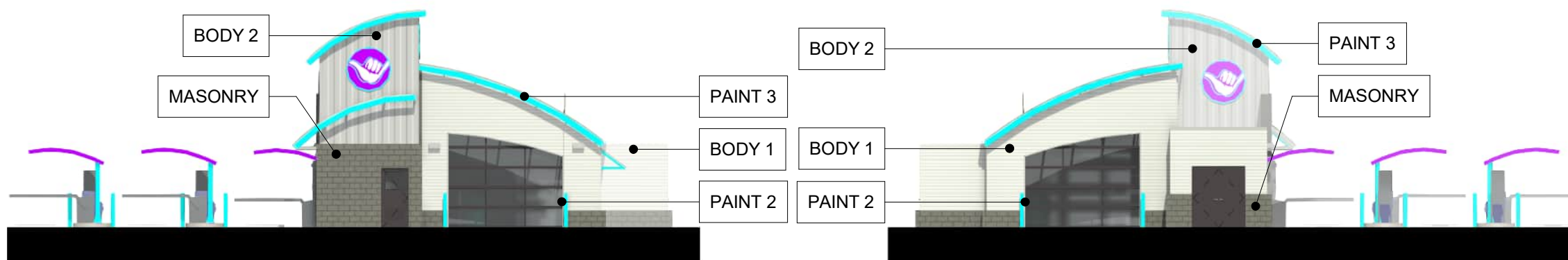


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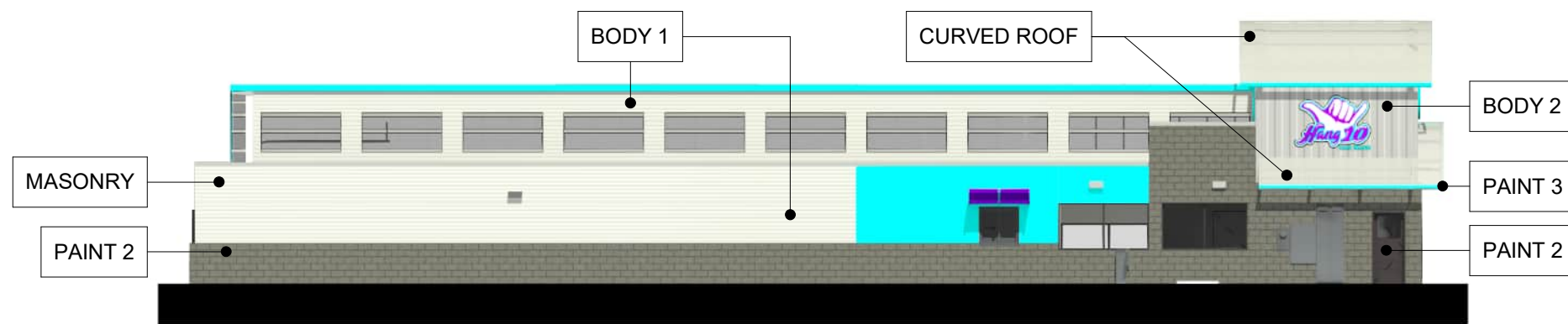


FRONT ELEVATION



LEFT ELEVATION

RIGHT ELEVATION



BACK ELEVATION

CURVED ROOF

EXPOSED STEEL



POLYCARBONATE ROOF



BODY 1

METAL PANEL



BODY 2

METAL PANEL



MASONRY

BLOCK



PAINT

WALL TRIM PAINT 1



DOORS & FRAMES PAINT 2

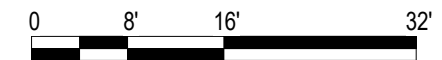


AWNING PAINT 3



STOREFRONT

STOREFRONT



SCALE : 1/16" = 1'-0"

HANG 10 - WORCESTER

1059 GRAFTON ST
WORCESTER, MA

PROJECT NO.: PDP23.CWB.002
DATE: 01/27/2023
DRAWN BY: MMK
CHECKED BY: JTK

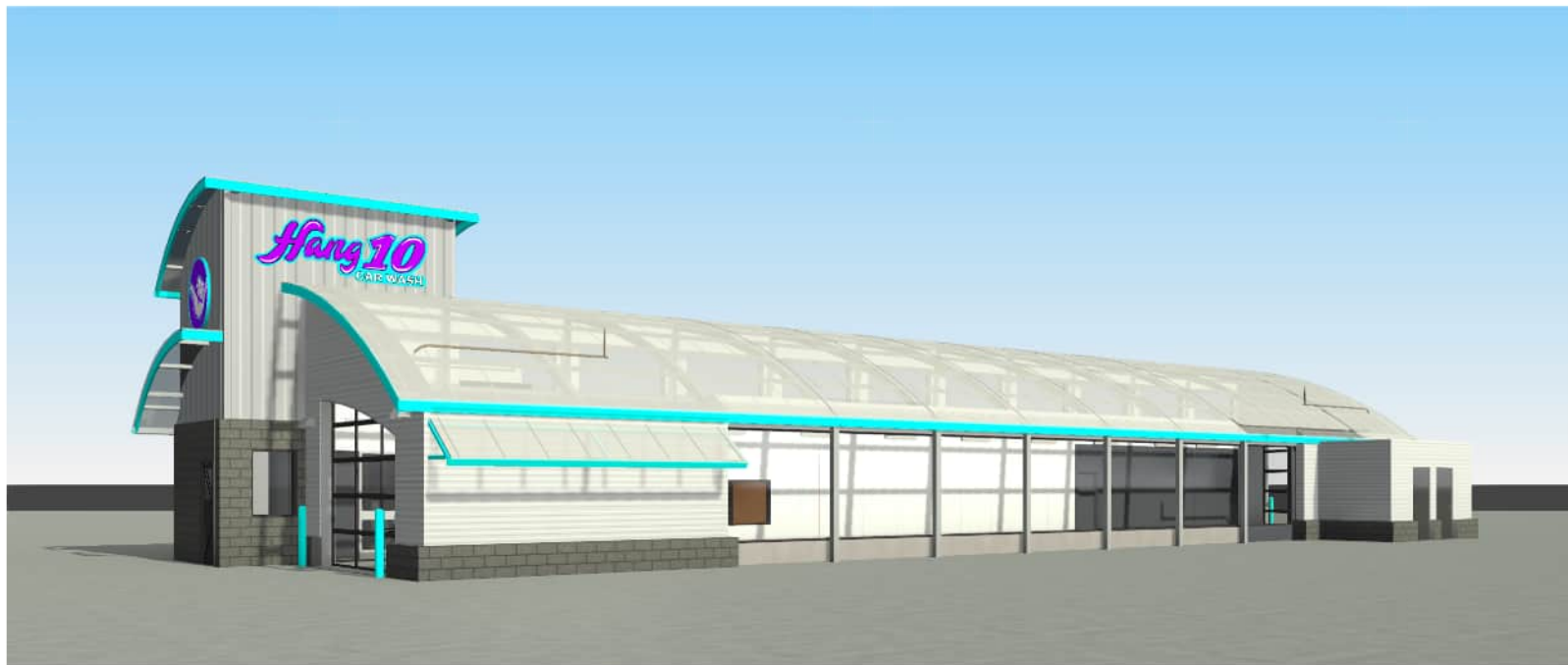


BUILDING ELEVATIONS



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HANG 10 - WORCESTER

1059 GRAFTON ST
WORCESTER, MA

PROJECT NO.: PDP23.CWB.002
 DATE: 01/27/2023
 DRAWN BY: MMK
 CHECKED BY: JTK



PERSPECTIVES



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