

SOURCE: READING, MA QUADRANGLE MAP, 7.5 MINUTE SERIES, DATED: 2024

**USGS TOPO MAP**

SCALE: 1" = 1,000'

# LAND DEVELOPMENT PLANS FOR PRIMROSE SCHOOLS FRANCHISING COMPANY PROPOSED CHILD CARE FACILITY

MAP 28, LOT 113

885 MAIN STREET

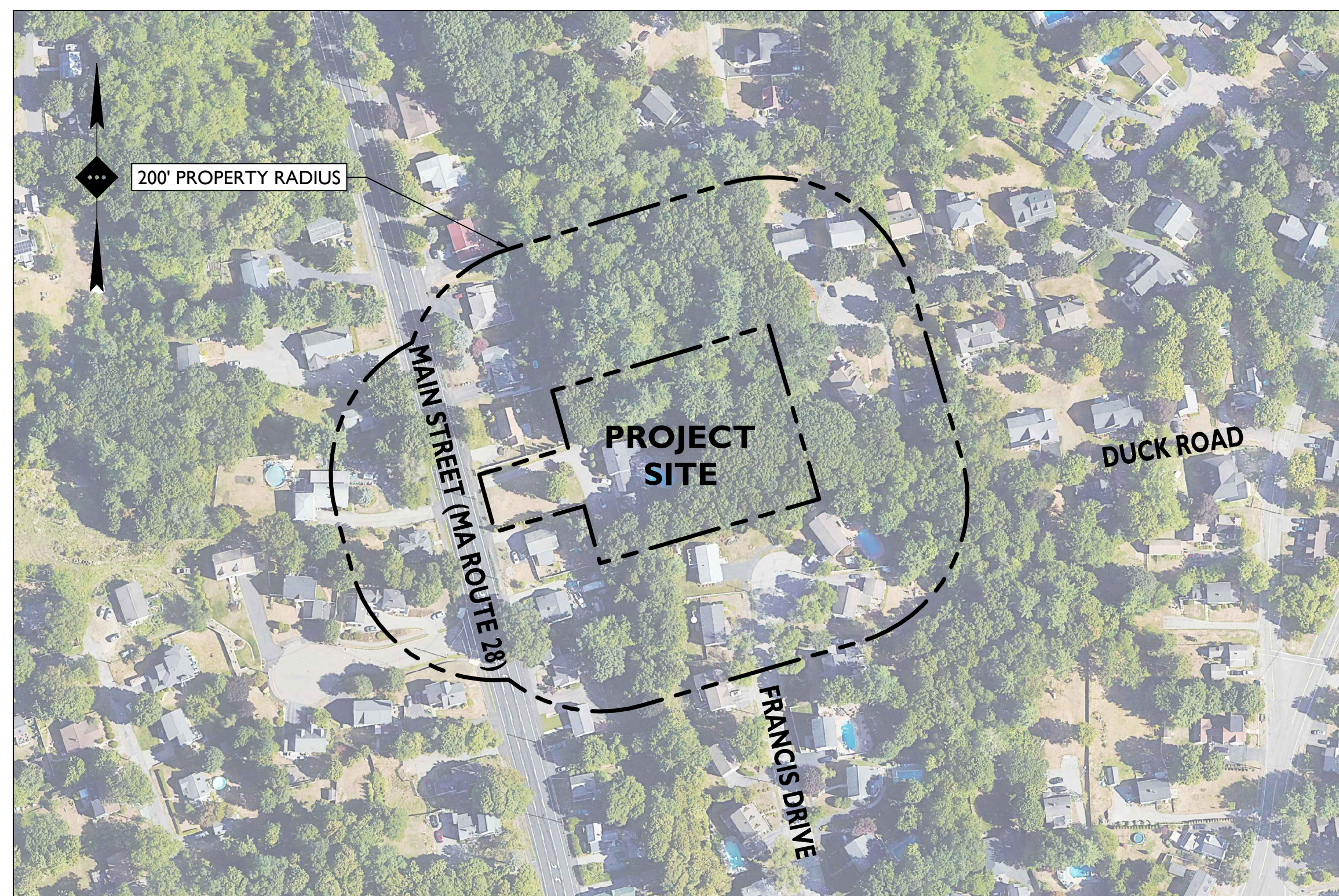
TOWN OF READING, MIDDLESEX COUNTY, MASSACHUSETTS

**APPLICANT**  
PRIMROSE SCHOOLS FRANCHISING COMPANY  
3200 WINDY HILL ROAD SE  
SUITE 1200E,  
ATLANTA, GA 30339  
MTAYLOR@PRIMROSESCHOOLS.COM

**OWNER**  
JOSEPH P NORDEN  
885 MAIN STREET  
READING, MA 01867



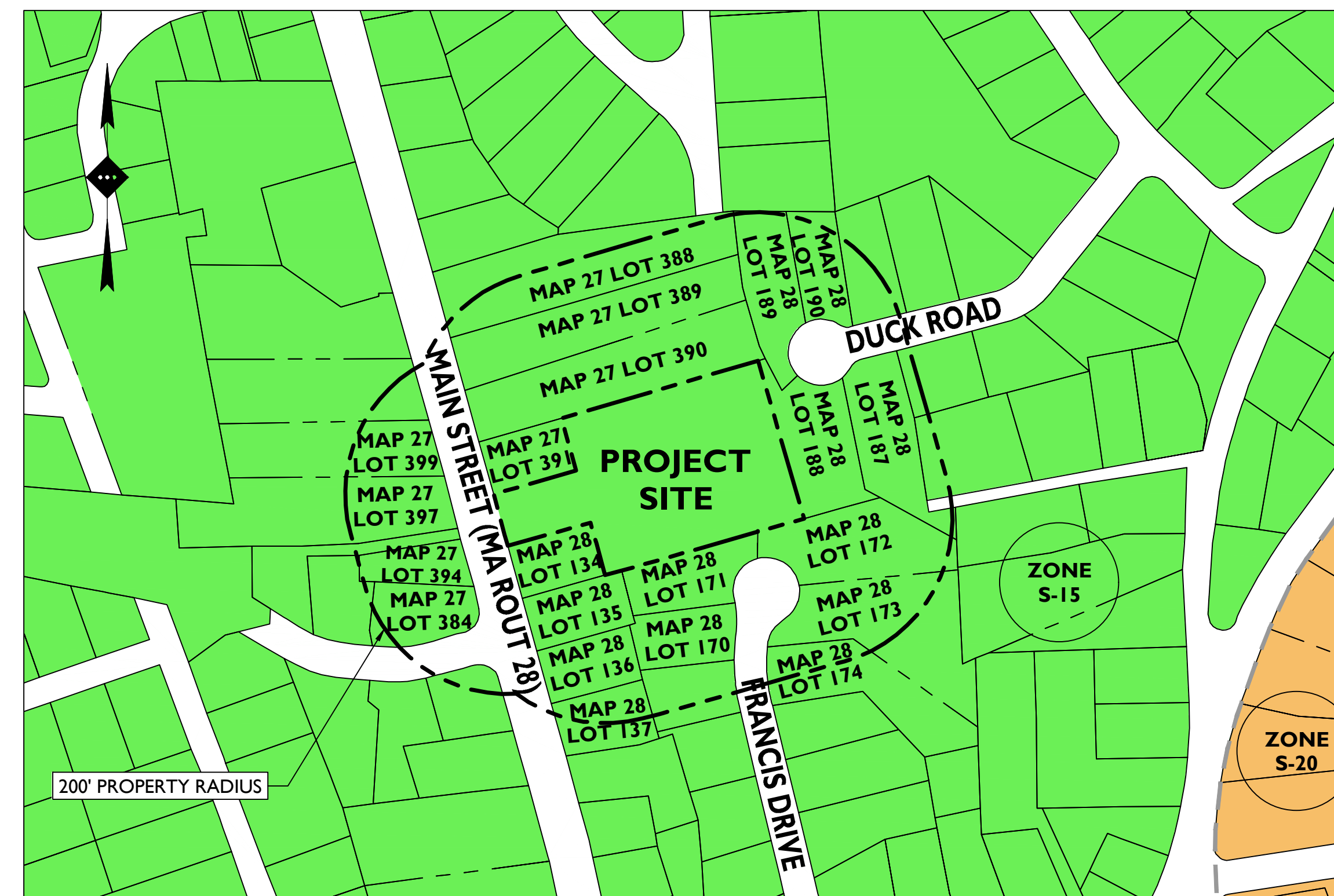
Know what's below  
Call before you dig.



SOURCE: GOOGLE EARTH IMAGE, DATED: 06/13/2022

**AERIAL MAP**

SCALE: 1" = 150'



SOURCE: TOWN OF READING ONLINE GIS MAPPING

**TAX / ZONING / OTHER MAP**

SCALE: 1" = 150'±

**ZONING LEGEND:**

	(S-15) - SINGLE FAMILY 15 DISTRICT
	(S-20) - SINGLE FAMILY 20 DISTRICT

PLANS PREPARED BY:



Rutherford, NJ · New York, NY · Salem, MA  
Princeton, NJ · Tampa, FL · Birmingham, MI · Providence, RI  
www.stonefieldeng.com

56 Pine Street, Providence, RI 02903  
Phone 617.203.2076

**TOWN OF READING 200' PROPERTY OWNERS LIST**

PROPERTY ID:	OWNER	OWNER'S ADDRESS
27-386	KOUTOVIDES DAKIS	17 BETHESDA LANE
28-166	MADAN SIMRAN	17 BUNKER LANE
28-286	WALSH DENIS	24 DUCK ROAD
28-191	GENT PETER	27 DUCK ROAD
28-187	SWEENEY MICHAEL	30 DUCK ROAD
28-190	MARRIONE PETER	31 DUCK ROAD
28-188	GORSKI JONATHAN	34 DUCK ROAD
28-189	DONAHUE ANDREW	35 DUCK ROAD
28-174	WHALEN RICHARD	49 FRANCIS DRIVE
28-169	COUGHLIN SAMANTHA	50 FRANCIS DRIVE
28-170	REID GARNET	54 FRANCIS DRIVE
28-173	CURTIN ANDREW	55 FRANCIS DRIVE
28-171	CULLEN MARK	58 FRANCIS DRIVE
28-172	MAYES LISA	59 FRANCIS DRIVE
28-137	TASCO KATRINA	869 MAIN STREET

27-382	872 874 MAIN STREET LLC	872 MAIN STREET
28-136	GNANARATNAM JOHN	873 MAIN STREET
28-135	MATTHEWS CRYSTAL	877 MAIN STREET
28-134	WILLIFORD JONATHAN	881 MAIN STREET
27-384	MOREIRA GREGORY	882 MAIN STREET
27-394	GEORGE JENIFER	884 MAIN STREET
27-397	JOYCE MARY ELIZABETH	890 MAIN STREET
27-391	DENTREMONT ARTHUR	891 MAIN STREET
27-390	LEETE KAVIN R ETAL TRUSTEES	895 MAIN STREET
27-399	SANDBERG ELLEN	896 MAIN STREET
27-389	LOGIUDICE KAREN R TRUSTEES	899 MAIN STREET
27-401	READING KOREAN CHURCH OF THE NAZARENE	900 MAIN STREET
27-388	PATEL HASMUKH	905 MAIN STREET

**PLAN REFERENCE MATERIALS:**

- THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - EXISTING CONDITIONS SURVEY, PREPARED BY NORTHEAST GEOSPATIAL, DATED FEBRUARY 24, 2025
  - WETLAND BORDER REPORT, PREPARED BY GODDARD CONSULTING, DATED DECEMBER 02, 2024
  - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO, DATED JUNE 13, 2022
  - TAX AND ZONING MAP OBTAINED FROM THE TOWN OF READING ONLINE GIS MAPPING
  - ARCHITECTURAL PLANS, PREPARED BY ADA ARCHITECTS, DATED MARCH 5, 2025
- ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

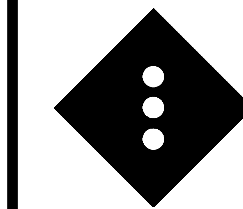
**SHEET INDEX**

DRAWING TITLE	SHEET #
COVER SHEET	C-1
EXISTING CONDITIONS PLAN	C-2
DEMOLITION PLAN	C-3
SITE PLAN	C-4
GRADING PLAN	C-5
STORMWATER MANAGEMENT PLAN	C-6
UTILITY PLAN	C-7
LIGHTING PLAN	C-8
SOIL EROSION & SEDIMENT CONTROL PLAN	C-9
LANDSCAPING PLAN	C-10 - C-11
CONSTRUCTION DETAILS	C-12 - C-18

ISSUE	DATE	BY	DESCRIPTION
01	05/06/2025	SCL	ISSUED FOR TOWN COMMENTS
00	03/07/2025	AJD	ISSUED FOR MUNICIPAL SUBMISSION

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LAND DEVELOPMENT PLANS  
**PRIMROSE SCHOOLS**  
**FRANCHISING COMPANY**  
PROPOSED CHILD DAY  
CARE FACILITY  
PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
MIDDLESEX COUNTY, MASSACHUSETTS

JOSHUA H. KLINE, P.E.  
MASSACHUSETTS LICENSE No. 53936  
LICENSED PROFESSIONAL ENGINEER

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SCALE: AS SHOWN PROJECT ID: BOS-240115

TITLE:

**COVER SHEET**

DRAWING:

**C-1**





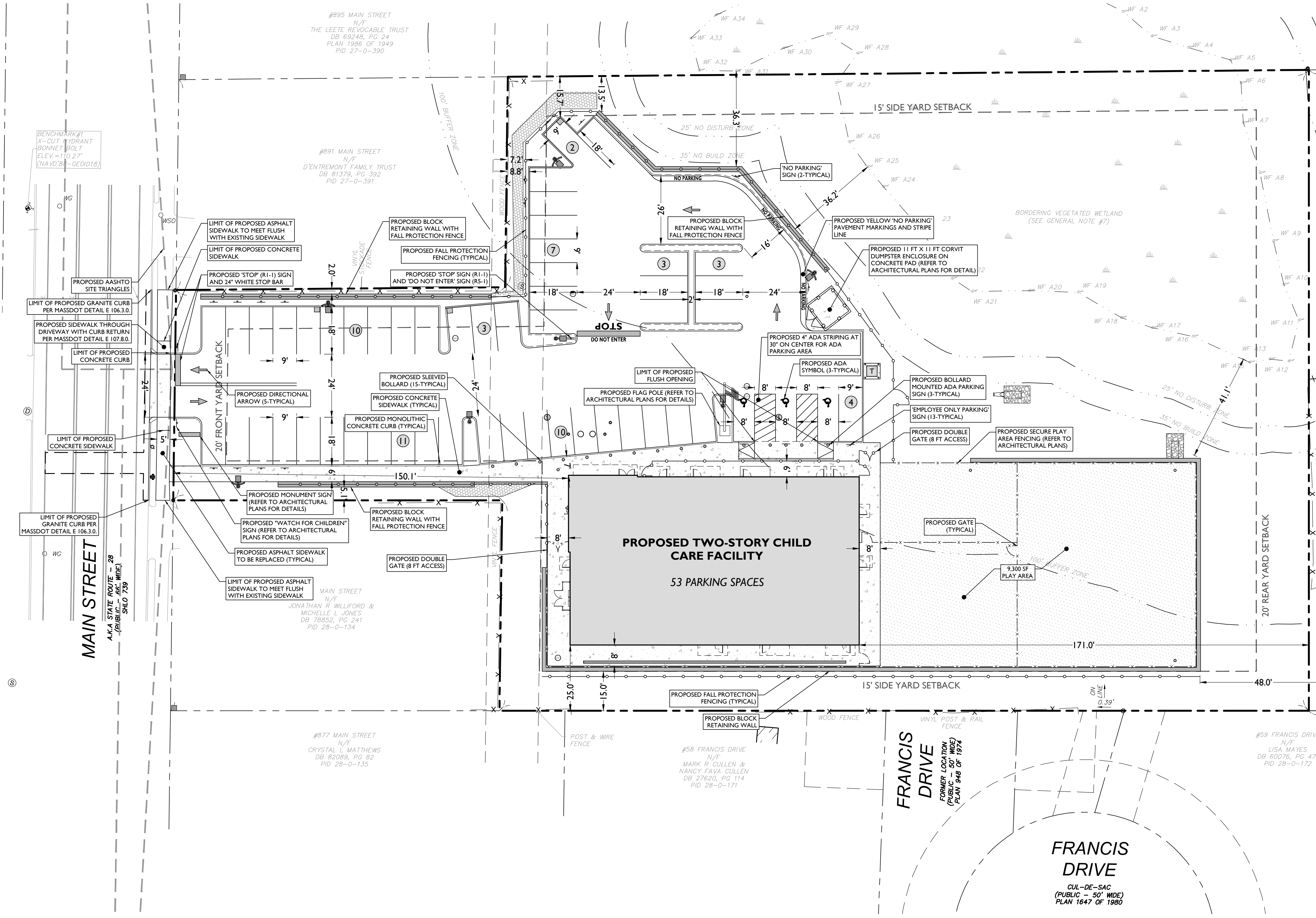
LAND USE AND ZONING			
PARCEL ID: 028-0-0000-0133.0			
SINGLE FAMILY 15 DISTRICT (S-15)			
PROPOSED USE	PERMITTED USE		
CHILD CARE FACILITY	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	15,000 SF (0.34 AC)	84,280 SF (1.94 AC)	NO CHANGE
MINIMUM LOT AREA OUTSIDE OF WETLAND RESOURCE AREA	12,000 SF	71,063 SF	NO CHANGE
MINIMUM LOT FRONTAGE	100 FT	80 FT (EN)	NO CHANGE
MINIMUM FRONT YARD	20 FT	169.5 FT	150.1 FT
MINIMUM SIDE YARD	15 FT	42.2 FT	25.0 FT
MINIMUM REAR YARD	20 FT	208.2 FT	171.0 FT
MAXIMUM LOT COVERAGE	25% (21,070 SF)	3.9% (3,320 SF)	8.4% (7,064 SF)
MAXIMUM BUILDING HEIGHT	35 FT	<35 FT	<35 FT

(EN) EXISTING NON-CONFORMITY

OFF-STREET PARKING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 9.1.1.7	REQUIRED PARKING FOR NURSERY/ KINDERGARTEN / ELEMENTARY: 1 SPACE / EMPLOYEE + 1 SPACE / 7 STUDENTS EMPLOYEE = 28 EMPLOYEES = 28 SPACES STUDENTS = 177 STUDENTS = 25 SPACES <b>REQUIRED = 53 SPACES</b>	53 SPACES
§ 9.1.2.2	PARKING SPACE DIMENSIONS: 9 FT X 18 FT	9 FT X 18 FT

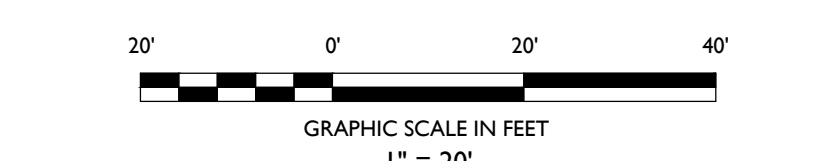
SIGNAGE REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 8.5.6	WALL MOUNTED SIGN REQUIREMENTS: MAXIMUM AREA: 2 SF PER LF OF FACADE 2 SF X 110 LF = 220 SF	24 SF
§ 8.5.6	FREESTANDING SIGN REQUIREMENTS: MAXIMUM NUMBER OF SIGNS: 1/LOT MAXIMUM AREA: 35 SF MAXIMUM HEIGHT: 10.5 FT MINIMUM SIDE SETBACK: 20 FT	1 SIGN (*) 25 FT 8 FT 24.3 FT

(\*) ONE (1) FREESTANDING SIGN ALLOWED BY SPECIAL PERMIT



SYMBOL	DESCRIPTION
---	PROPERTY LINE
- - -	SETBACK LINE
- · - · -	SAWCUT LINE
---	PROPOSED CURB
---	PROPOSED MOUNTABLE CURB
---	PROPOSED EXTENDED CURB
○	PROPOSED SIGNS / BOLLARDS
▭	PROPOSED BUILDING
▭	PROPOSED CONCRETE
▭	PROPOSED TURF
▭	PROPOSED STABILIZED SLOPE
▭	PROPOSED GRAVEL
○	PROPOSED AREA LIGHT
---	PROPOSED RETAINING WALL
---	PROPOSED FALL PROTECTION FENCE
---	PROPOSED PLAY AREA FENCING
---	PROPOSED SCREENED FENCE
---	PROPOSED BUILDING DOORS
---	WETLAND LIMITS
---	WETLAND BUFFER

- GENERAL NOTES**
- THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION.
  - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
  - ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC, AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
  - THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
  - THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
  - THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
  - THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  - THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
  - THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
  - SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.



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LAND DEVELOPMENT PLANS

**PRIMROSE SCHOOLS FRANCHISING COMPANY**

PROPOSED CHILD DAY CARE FACILITY

PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
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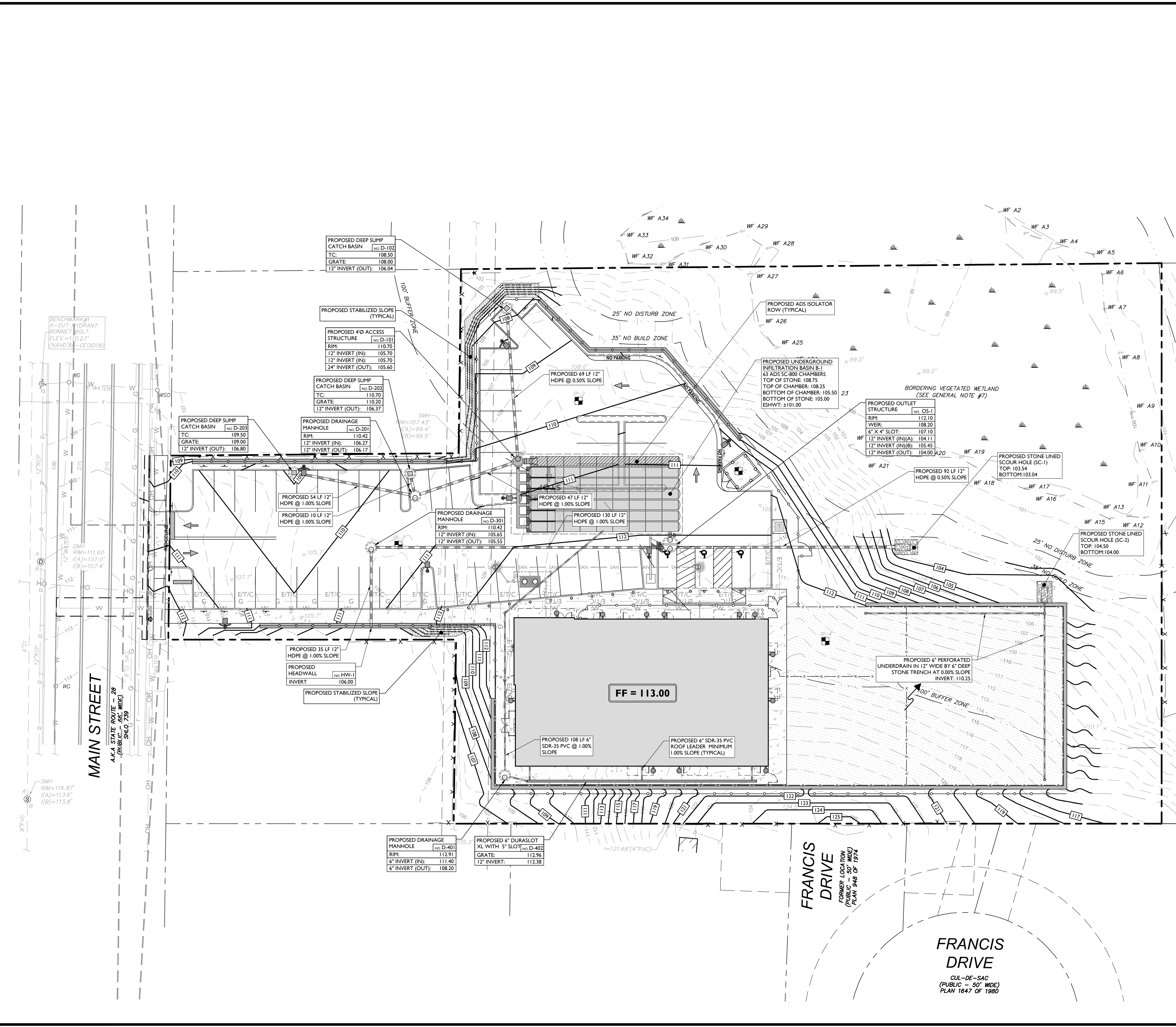
SCALE: 1" = 20' PROJECT ID: BOS-24015

TITLE: SITE PLAN

DRAWING: C-4



2:10/20/2018 09:52:40 28113 PRIMROSE SCHOOLS - 88 MAIN STREET, FRAMINGHAM, MA 01902 (P) 508.881.1111 (F) 508.881.1111



SYMBOL	DESCRIPTION
---	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
---	PROPOSED GRADING RIDGELINE
○	PROPOSED STORMWATER STRUCTURES
---	PROPOSED TRENCH DRAIN
---	PROPOSED STORMWATER PIPING
○	PROPOSED UNDERGROUND OUTLET STRUCTURE

**DRAINAGE AND UTILITY NOTES**

- THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
- CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP GRADIENT.
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

**EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES**

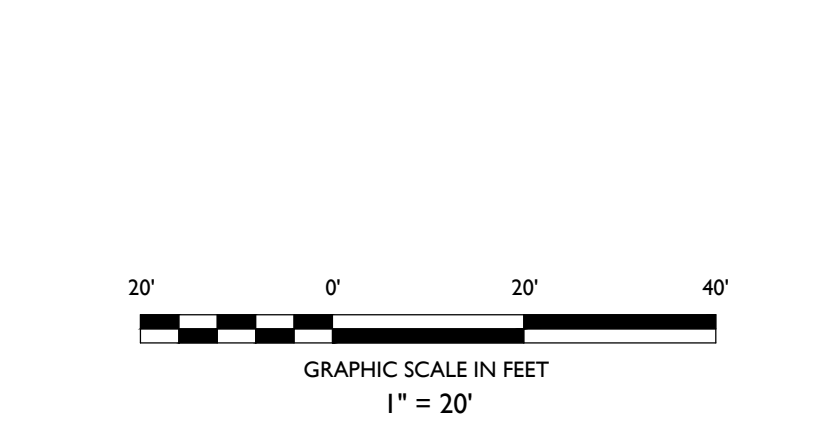
- THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION. THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL SHORING DESIGNER. SUCH DESIGN SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

**STORMWATER INFILTRATION BMP CONSTRUCTION NOTES**

- PRIOR TO THE START OF CONSTRUCTION, ANY AREA DESIGNATED TO BE USED FOR AN INFILTRATION BMP (E.G. BASIN, BIOTENTION AREA, ETC.) SHALL BE FENCED OFF AND SHALL NOT BE UTILIZED AS STORAGE FOR CONSTRUCTION EQUIPMENT OR AS A STOCKPILE AREA FOR CONSTRUCTION MATERIALS. NO ACTIVITY SHALL BE PERMITTED WITHIN THE INFILTRATION BASIN AREA UNLESS RELATED TO THE CONSTRUCTION OF THE INFILTRATION BASIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL SUBCONTRACTORS OF BASIN AREA RESTRICTIONS.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT, WHERE PRACTICAL, TO AVOID SUBGRADE SOIL COMPACTION IN THE AREAS DESIGNATED TO BE USED FOR AN INFILTRATION BMP.
- ALL EXCAVATION WITHIN THE LIMITS OF ANY INFILTRATION BMP SHALL BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT. ALL EXCAVATION EQUIPMENT SHALL BE PLACED OUTSIDE THE LIMITS OF THE BASIN WHERE FEASIBLE. THE USE OF LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT (LESS THAN 8 PSI APPLIED TO THE GROUND SURFACE) IS RECOMMENDED WITHIN THE BASIN LIMITS.
- THE SEQUENCE OF SITE CONSTRUCTION SHALL BE COORDINATED WITH BASIN CONSTRUCTION TO ADHERE TO SEQUENCING LIMITATIONS.
- DURING THE FINAL GRADING OF AN INFILTRATION BASIN, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAW OR EQUIVALENT GRADING EQUIPMENT. ALL GRADING EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE BASIN BOTTOM WHERE FEASIBLE.
- THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY TO DETERMINE IF WITNESS TESTING IS REQUIRED DURING INFILTRATION BASIN EXCAVATION AND/OR SOIL INFILTRATION TESTING.

**STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES**

- THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.



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**PRIMROSE SCHOOLS**  
**FRANCHISING COMPANY**

**PROPOSED CHILD DAY CARE FACILITY**

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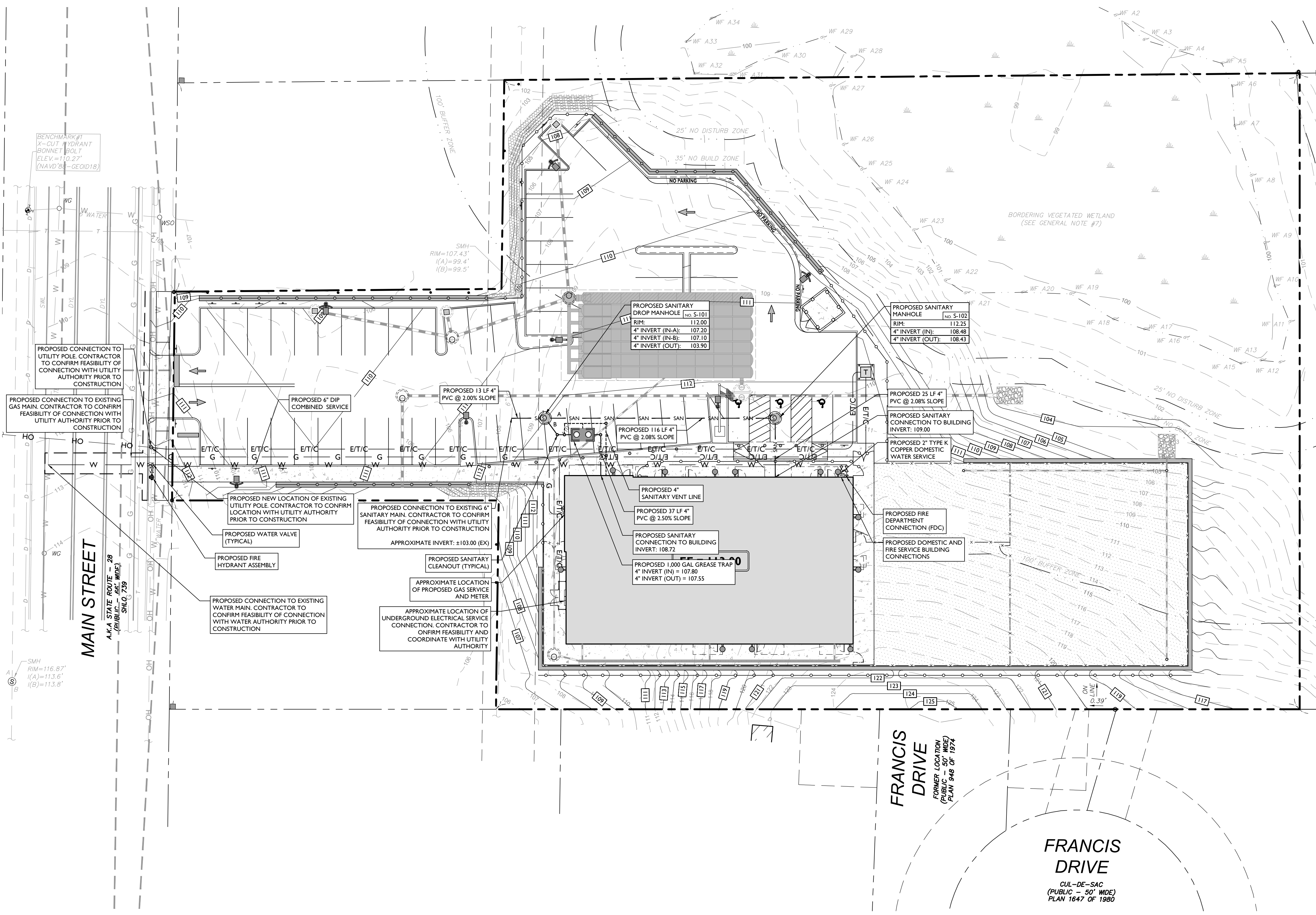
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SCALE: 1" = 20' PROJECT ID: BOS-240115

TITLE:  
**STORMWATER MANAGEMENT PLAN**

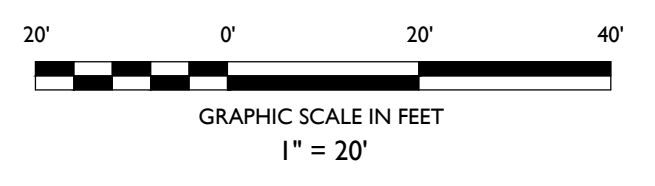
DRAWING:  
**C-6**

Z:\PROJECTS\2025\240115 PRIMROSE SCHOOLS - 885 MAIN STREET BUILDING - P:\CADD\DWG\240115\UTIL.DWG



SYMBOL	DESCRIPTION
---	PROPERTY LINE
— SAN —	PROPOSED SANITARY LATERAL
— W —	PROPOSED DOMESTIC WATER SERVICE
— E/T/C —	PROPOSED ELECTRICAL/DATA CONDUITS
— T/C —	PROPOSED DATA CONDUITS
— E —	PROPOSED ELECTRIC CONDUITS
— OH —	PROPOSED OVERHEAD WIRES
— G —	PROPOSED GAS LINE
⊗	PROPOSED VALVE
⊕	PROPOSED WATER TEE / BEND
⊙	PROPOSED FIRE HYDRANT
⊕	PROPOSED FIRE DIRECT CONNECTION (FDC)
⊙	PROPOSED SANITARY MANHOLE / CLEANOUT
⊕	PROPOSED UTILITY POLE
⊕	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS

- DRAINAGE AND UTILITY NOTES**
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
  - THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
  - A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
  - THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
  - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
  - CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADE.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
  - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.



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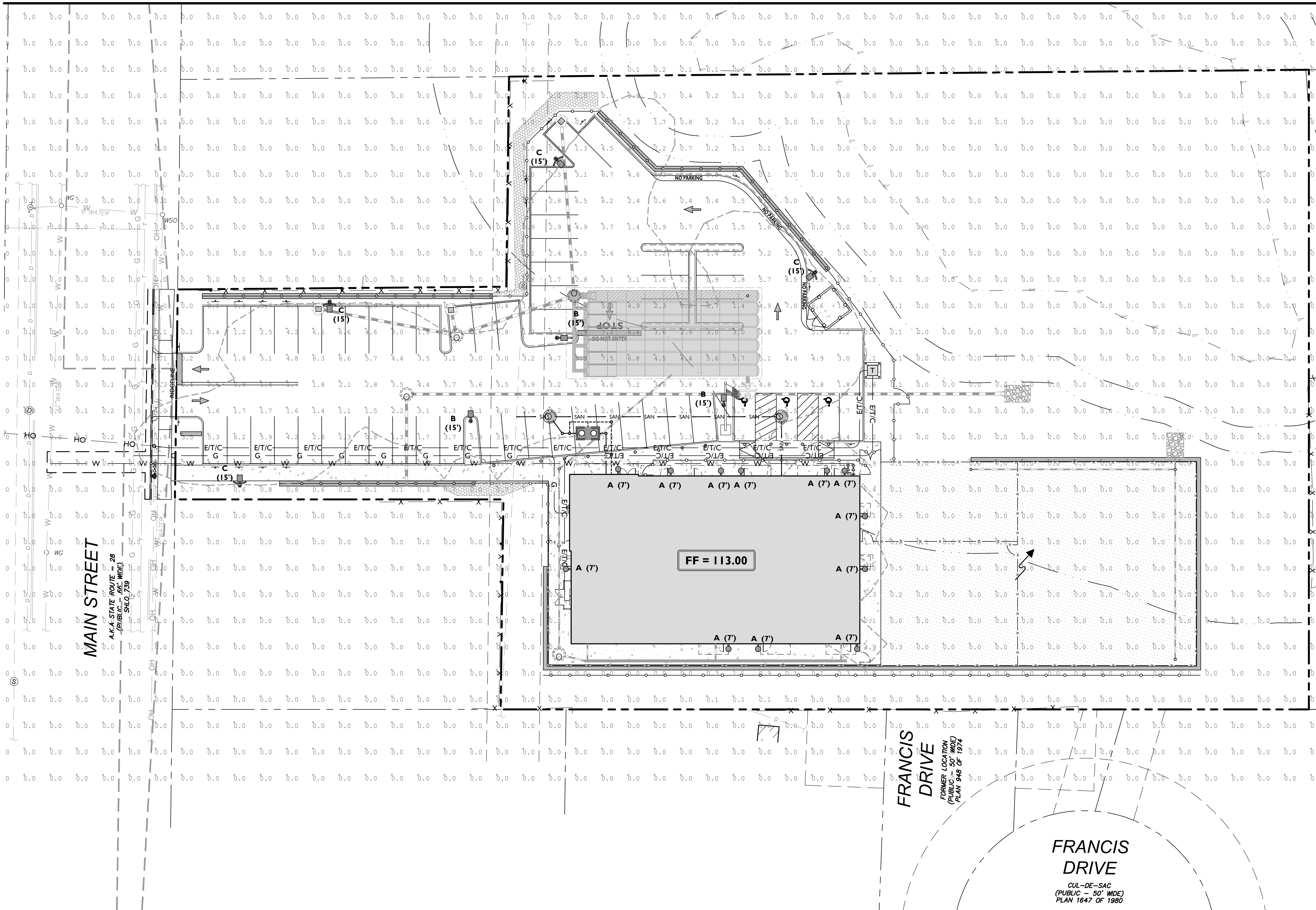
SCALE: 1" = 20' PROJECT ID: BOS-240115

TITLE:  
**UTILITY PLAN**

DRAWING:  
**C-7**

PROPOSED LUMINAIRE SCHEDULE							
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	MANUFACTURER	IES FILE
	A	11	HI-LITE WALL MOUNT LIGHT - LED - 30K - 12 WATT	TYPE V	0.9	HI-LITE MFG	NEWH-CGU-1B_LED3.IES
	B	3	MIRADA (MRM) AREA LIGHT - 12LED - 30K	TYPE III	0.9	LSI	MRM-LED-12L-SIL-3-30-70CRI.IES
	C	4	MIRADA (MRM) AREA LIGHT - 12LED - 30K - W/ INTEGRATED LOUVER	TYPE III	0.9	LSI	MRM-LED-12L-SIL-3-30-70CRI-IL.IES

LIGHTING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 4.6.5 - A	MINIMIZE GLARE BEYOND PROPERTY LINE	0.0 FC



SYMBOL	DESCRIPTION
---	PROPOSED ISOMETRIC LINE
A (XX')	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
+xx	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)
	PROPOSED AREA LIGHT
	PROPOSED BUILDING MOUNTED LIGHT

**GENERAL LIGHTING NOTES**

- THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH AS WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
- WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
- UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:
  - LIGHT EMITTING DIODES (LED): 0.90
  - HIGH PRESSURE SODIUM: 0.72
  - METAL HALIDE: 0.72
- THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC.

ISSUED FOR TOWN COMMENTS	ISSUED FOR MUNICIPAL SUBMISSION	DATE	BY	DESCRIPTION	
SCL	AID	05/06/2025	01	00	ISSUE

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Phone 617.203.2076

LAND DEVELOPMENT PLANS

**PRIMROSE SCHOOLS**  
**FRANCHISING COMPANY**

PROPOSED CHILD DAY CARE FACILITY

PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
MIDDLESEX COUNTY, MASSACHUSETTS

JOSHUA H. KLINE, P.E.  
MASSACHUSETTS LICENSE No. 53936  
LICENSED PROFESSIONAL ENGINEER

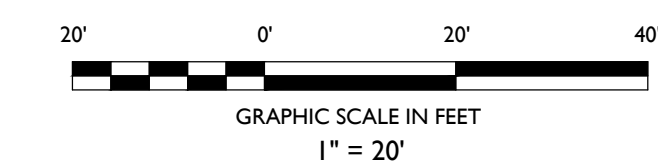
**STONEFIELD**  
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SCALE: 1" = 20' PROJECT ID: BOS-240115

TITLE:  
**LIGHTING PLAN**

DRAWING:

**C-8**



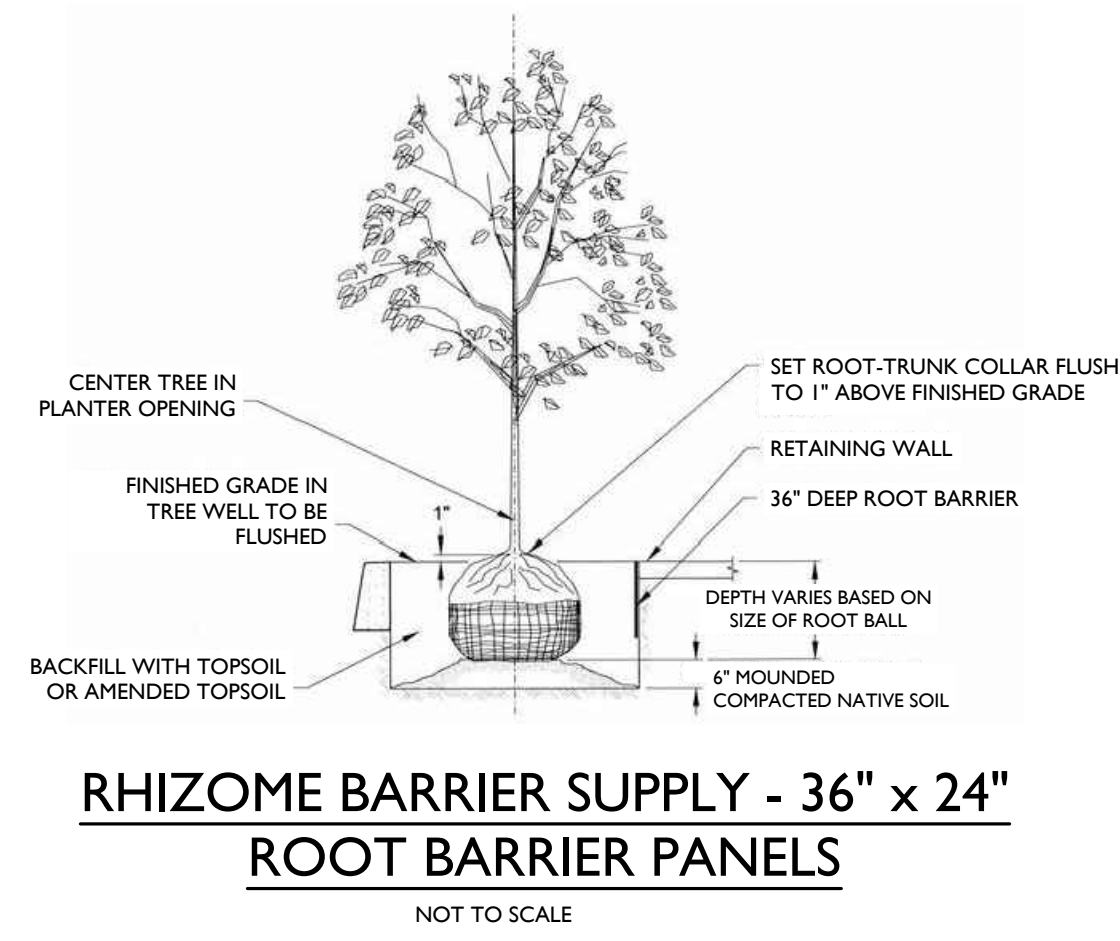
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PLANT SCHEDULE							
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
DECIDUOUS TREES							
	LIQ	2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	3" - 3.5" CAL	B&B	RECOMMENDED NATIVE PLANT
	MAG	2	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	3" - 3.5" CAL	B&B	RECOMMENDED NATIVE PLANT
	NYS	3	NYSSA SYLVATICA	TUPELO	3" - 3.5" CAL	B&B	RECOMMENDED NATIVE PLANT
	PAL	4	QUERCUS PALUSTRIS	PIN OAK	3" - 3.5" CAL	B&B	RECOMMENDED NATIVE PLANT
	TIL	1	TILIA AMERICANA	AMERICAN LINDEN	3" - 3.5" CAL	B&B	RECOMMENDED NATIVE PLANT
EVERGREEN TREES							
	VIR	41	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	6" - 8" HT	B&B	RECOMMENDED NATIVE PLANT
	JUN	4	JUNIPERUS VIRGINIANA 'N. SELECT GREEN'	EMERALD FEATHER EASTERN REDCEDAR	6" - 8" HT	B&B	RECOMMENDED NATIVE PLANT
	PIC	8	PICEA GLAUCA	WHITE SPRUCE	6" - 8" HT	B&B	RECOMMENDED NATIVE PLANT
SHRUBS							
	VIB	8	VIBURNUM DENTATUM	VIBURNUM	18" - 24"	POT	RECOMMENDED NATIVE PLANT
EVERGREEN SHRUBS							
	GLA	22	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18" - 24"	POT	RECOMMENDED NATIVE PLANT
	TAX	6	TAXUS MEDIA 'DENSIFORMIS'	DENSE ANGLO-JAPANESE YEW	18" - 24"	POT	RECOMMENDED NATIVE PLANT
GROUND COVERS							
	CAR	79	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE	1 GAL.	POT, 24" O.C.	RECOMMENDED NATIVE PLANT
	BAR	47	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	1 GAL.	POT, 36" O.C.	RECOMMENDED NATIVE PLANT
PERENNIALS AND GRASSES							
	ROS	26	COREOPSIS ROSEA	ROSE COREOPSIS	1 GAL.	POT, 24" O.C.	RECOMMENDED NATIVE PLANT
	HEM	19	HEMEROCALLIS X STELLA DE ORO	STELLA DE ORO DAYLILY	1 GAL.	POT, 24" O.C.	RECOMMENDED NATIVE PLANT
	PAN	6	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	1 GAL.	POT, 24" O.C.	RECOMMENDED NATIVE PLANT

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

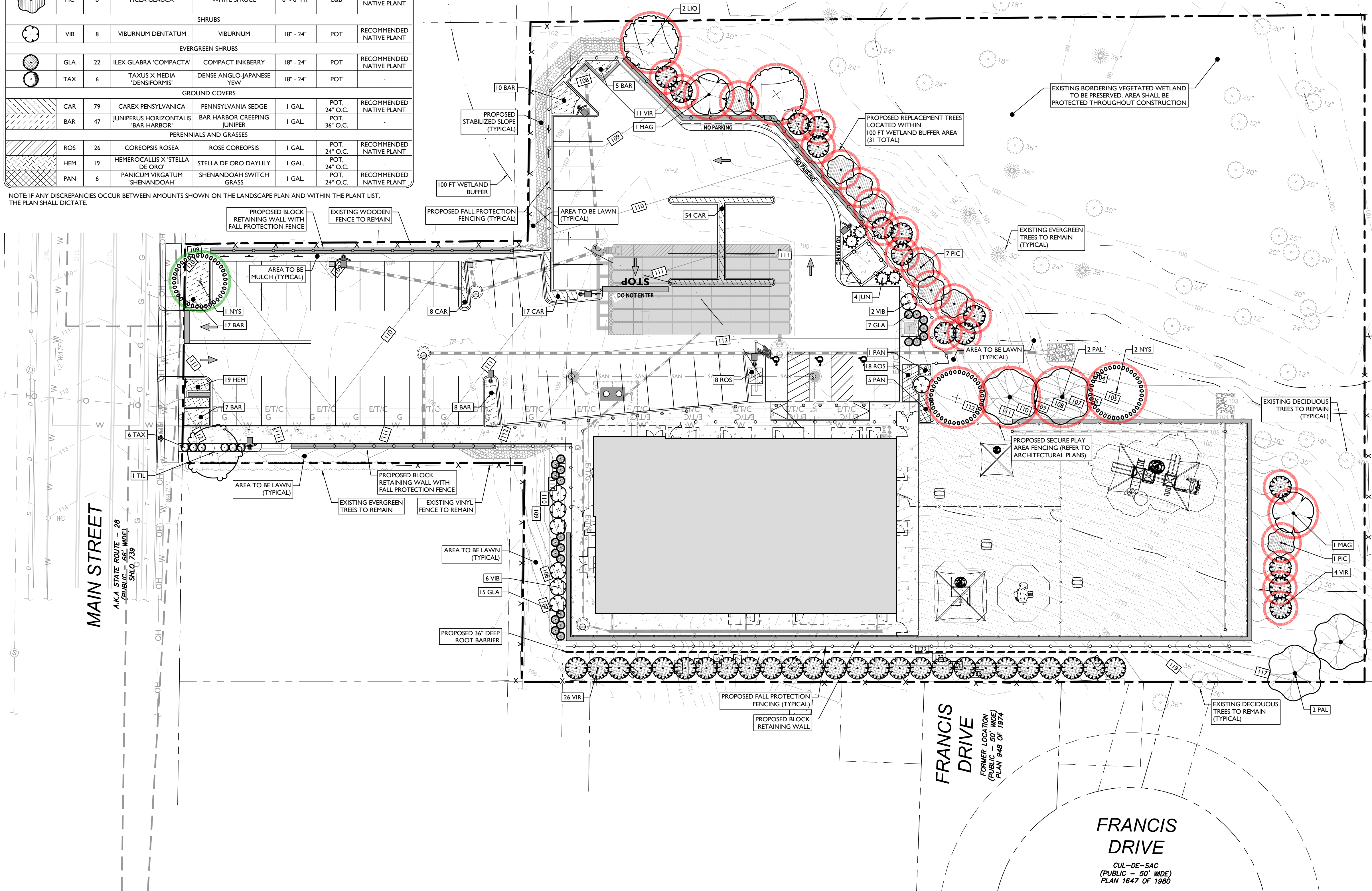
MAINTENANCE TASK	WINTER			SPRING			SUMMER			FALL					
	DEC	JAN	FEB	MAR	APR	MAY	FREQUENCY	JUN	JUL	AUG	FREQUENCY	SEP	OCT	NOV	FREQUENCY
SITE INSPECTION				X			ONCE PER SEASON	X	X		ONCE PER SEASON				ONCE PER SEASON
DEBRIS & WEED CONTROL				X	X	X	BI-WEEKLY	X	X	X	BI-WEEKLY	X	X		BI-WEEKLY
IRRIGATION MAINTENANCE				X			ONCE PER SEASON				N/A		X		ONCE PER SEASON
MULCHING				X			ONCE PER SEASON				N/A				N/A
MOWING OF TURF				X	X	X	WEEKLY	X	X	X	WEEKLY	X	X	X	WEEKLY
PRUNING				X	X		MONTHLY				N/A				ONCE PER SEASON
FERTILIZER & AMENDMENTS				X	X	X	MONTHLY	X	X	X	BI-WEEKLY	X	X	X	BI-WEEKLY
INSECT & DISEASE CONTROL				X	X		ONCE PER SEASON	X	X	X	BI-WEEKLY	X	X		N/A
PLANTING RENOVATION				X			ONCE PER SEASON				N/A		X		ONCE PER SEASON
LANDSCAPE STRUCTURES INSPECTION				X			ONCE PER SEASON				N/A				N/A
LIGHTING MAINTENANCE				X			ONCE PER SEASON				N/A		X		ONCE PER SEASON
PAVED SURFACE MAINTENANCE				X			ONCE PER SEASON				N/A				N/A



RHIZOME BARRIER SUPPLY - 36" x 24" ROOT BARRIER PANELS  
NOT TO SCALE

SYMBOL	DESCRIPTION
	PROPOSED ROOT BARRIER
	PROPOSED STREET TREES
	PROPOSED REPLACEMENT TREES

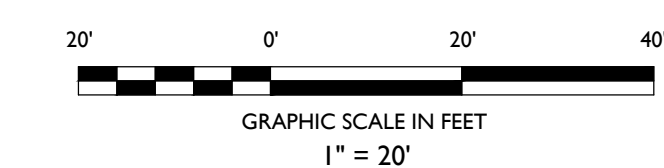
LANDSCAPING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 6.5.2	LANDSCAPE STANDARDS SIDE YARD SETBACKS SHALL BE PLANTED WITH GRASS, SHRUBS AND SHADE TREES	COMPLIES
§ 6.5.7	STREET TREES 1 TREE FOR EVERY 50 LF OF FRONTAGE (55 FT) * (1 TREE / 50 FT FRONTAGE) = 1 TREE	1 TREE



Know what's below  
Call before you dig.

**IRRIGATION NOTE:**  
IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

- LANDSCAPING NOTES**
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPE AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
  - THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.
  - THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
  - THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
  - THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.



ISSUED FOR TOWN COMMENTS	ISSUED FOR MUNICIPAL SUBMISSION	DATE	BY	DESCRIPTION
		01/07/2025	SCL	
		05/06/2025	AJD	
		08/07/2025	BY	
		01/00	ISSUE	

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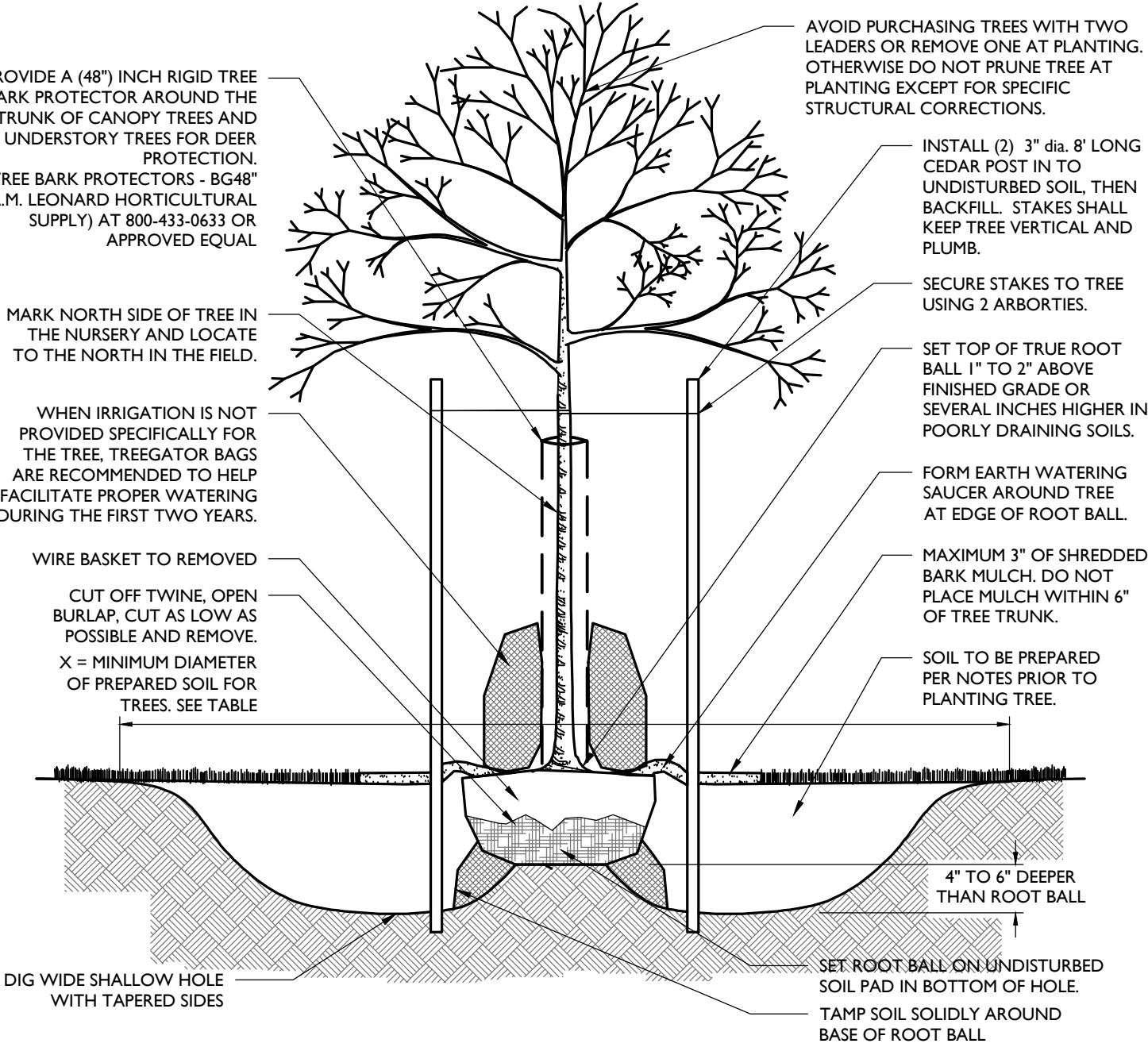
SCALE: 1" = 20' PROJECT ID: BOS-240115

TITLE:  
**LANDSCAPING PLAN**

DRAWING:  
**C-10**

**NOTES:**

- FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
- THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
- SOIL AMENDMENTS:
  - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX

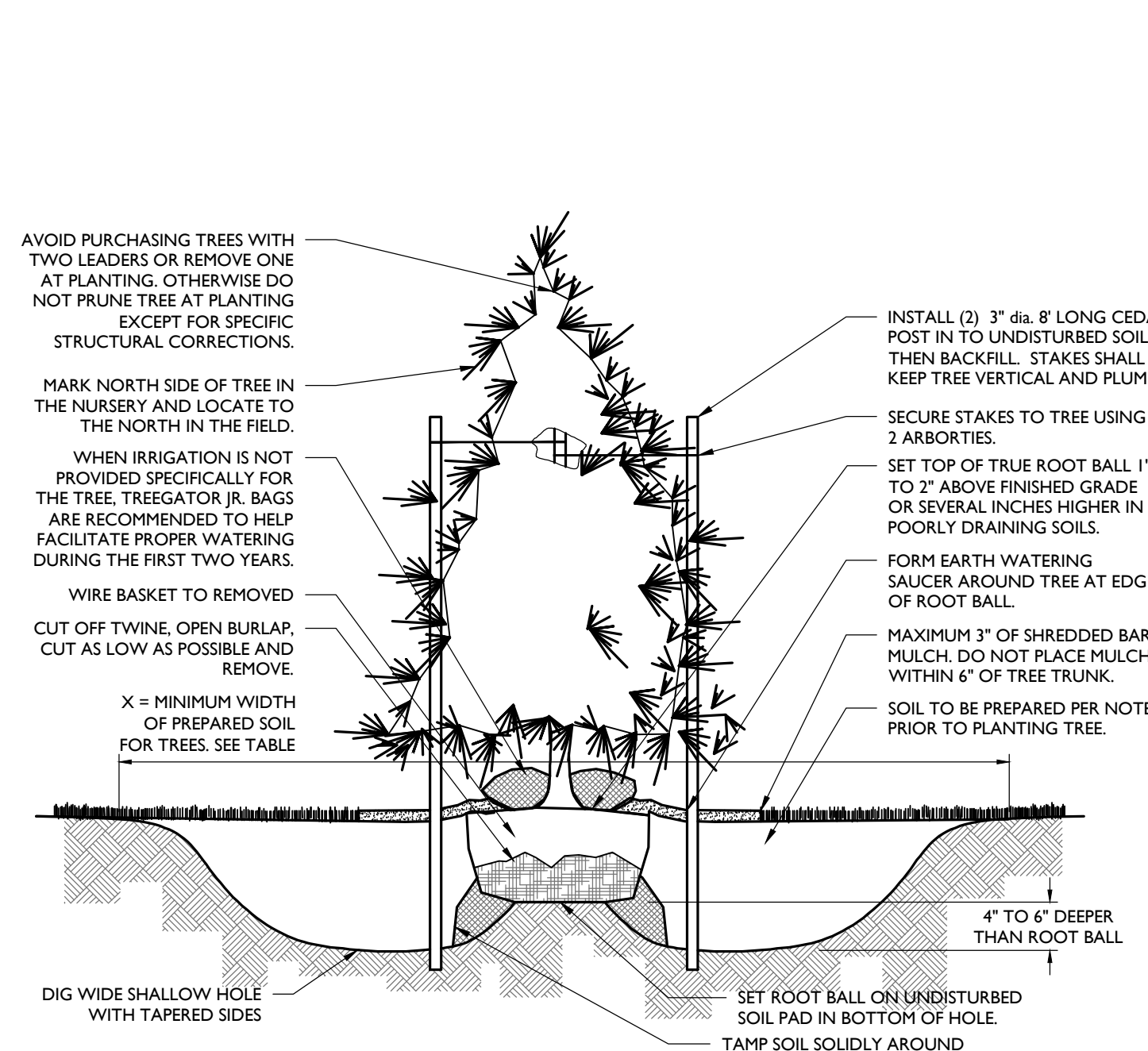


**DECIDUOUS TREE PLANTING DETAIL**

NOT TO SCALE

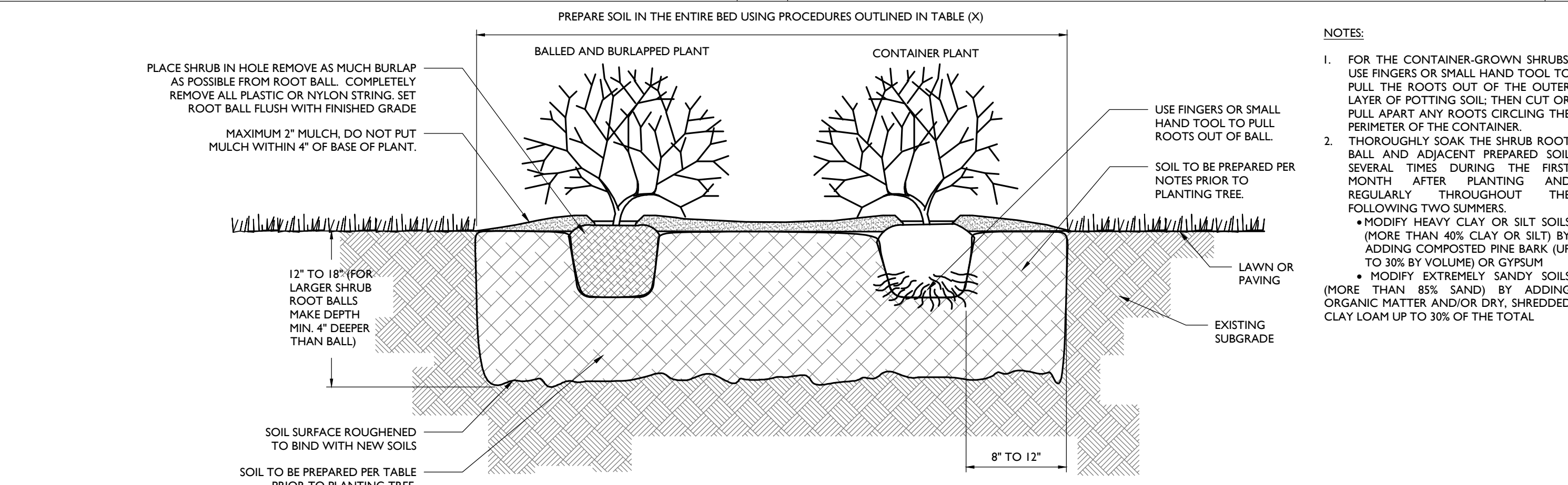
**NOTES:**

- FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
- THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
- SOIL AMENDMENTS:
  - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



**CONIFEROUS TREE PLANTING DETAIL**

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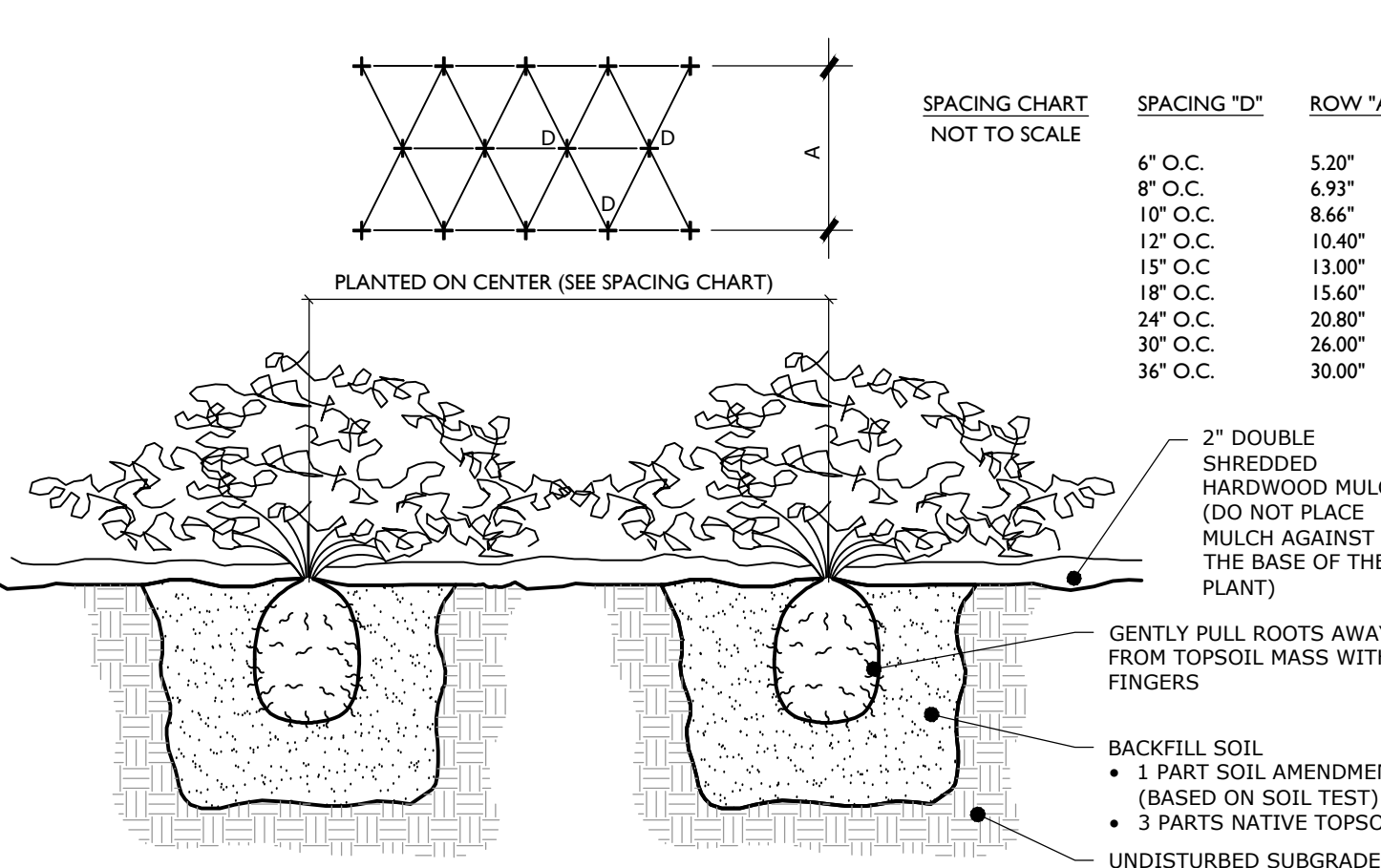


**DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL**

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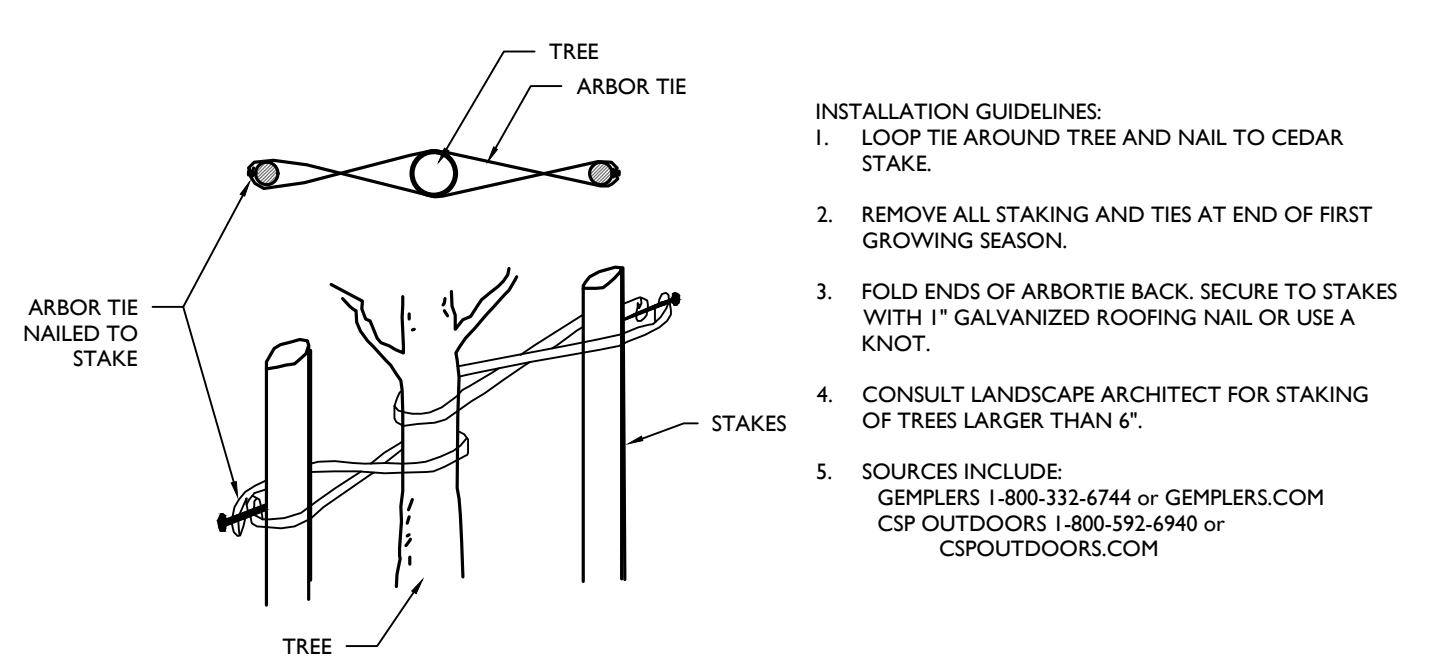
**NOTES:**

- THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
- SOIL AMENDMENTS:
  - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
- ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS



**GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL**

NOT TO SCALE



**ARBORTIE DETAIL**

NOT TO SCALE

**GENERAL LANDSCAPING NOTES:**

- THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
- WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL.
- IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL, IF SO REQUESTED.
- IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY.
- UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL.
- THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

**PROTECTION OF EXISTING VEGETATION NOTES:**

- BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIPLINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED TREE PROTECTION DETAILS. NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
- IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIPLINE OF TREES TO REMAIN, THE WORK SHALL BE PERFORMED AS FOLLOWS:
  - TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
  - RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") FROM APPROXIMATELY TWO INCHES (2") ABOVE THE FINISHED GRADE AT TREE TRUNK. GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."
  - LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST. WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."

**SOIL PREPARATION AND MULCH NOTES:**

- LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS.
- BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SOIL SPECIFICATION" OR "SOIL SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS:
  - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM.
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
- TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL, TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL OBTAINED FROM A WASHED, DRAINABLE AREAS, FREE FROM ALL CLAY, LUMPS, COARSE SAND, STONES, PEBBLES, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1").
- TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGHT.
- OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE.
- CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
- UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE GRADING WITHIN THE DISTURBED AREA OF THE SITE.
- LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS THE REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
- ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE WATER.
- DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND TREES PLANTED BY LANDSCAPE CONTRACTOR. GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF.
- WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.
- SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
- APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.
- ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:
  - MYCORRHIZAL FUNGI: A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.
  - DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL OR 3-OZ PER INCH CALIPER, MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. WATER TO SOIL SATURATION.
  - MYCORRHIZAL FUNGI: EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.
  - SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
  - FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
  - OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

**HEALTHY START MACRO TABS 12-8-8**

- FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS.
- TABLETS ARE FORMULATED FOR FLOW RELEASE OF NUTRIENTS AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12.8% NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PERINYL BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

SIZE AT PLANTING	IRRIGATION FOR VITALITY	IRRIGATION FOR SURVIVAL
< 2" CALIPER	DAILY FOR TWO WEEKS, EVERY OTHER DAY FOR TWO MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR TWO TO THREE MONTHS
2"-4 CALIPER	DAILY FOR ONE MONTH, EVERY OTHER DAY FOR THREE MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR THREE TO FOUR MONTHS
4" > CALIPER	DAILY FOR SIX WEEKS, EVERY OTHER DAY FOR FIVE MONTHS, WEEKLY UNTIL ESTABLISHED	TWICE WEEKLY FOR FOUR TO FIVE MONTHS

- TABLE NOTES:**
- AT EACH IRRIGATION APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL SURFACE. APPLY IT IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL, DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.
  - WHEN IRRIGATING FOR VITALITY, DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER OR WHEN PLANTING IN COOL CLIMATES. ESTABLISHMENT TAKES THREE TO FOUR MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.
  - WHEN IRRIGATING FOR SURVIVAL, TREES TAKE MUCH LONGER TO ESTABLISH THAN REGULARLY IRRIGATED TREES. IRRIGATION MAY BE REQUIRED IN THE NORMAL HOT, DRY PORTIONS OF THE FOLLOWING YEAR.

**PLANT MATERIAL AND HANDLING NOTES:**

- ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z601-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
- IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER COMMON NAMES.
- ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE.
- PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE REJECTED.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE.
- THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF.
- ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEMS NECESSARY FOR THE HEALTHY DEVELOPMENT OF THE PLANT. NO PLANT SHALL BE ACCEPTED WHEN THE BALLS OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREVIOUSLY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEEL-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
- ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INJURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
- ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING DETAILS.
- LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED COMPOST. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS SHALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE.
- NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
- PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INJURED PLANTS SHALL BE REMOVED.
- IF ROCKS OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO REMOVE OR ENLARGE PLANTING HOLES TO AVOID OBSTRUCTION.
- IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2') ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR AGENCY.
- INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS:
  - PLANTS (APRIL 15 - SEPTEMBER 30)
  - LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)
- THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPORT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15):
 

ABIES CONCOLOR	CORNUS VARIETIES	Ostrya VIRGINIANA
ACER BURGERIANUM	CRATAEGUS VARIETIES	PINUS NIGRA
ACER FRASERIANUM	CUPRESSACEAE VARIETIES	PLATANUS VARIETIES
ACER RUBRUM	FAGUS VARIETIES	POPULUS VARIETIES
ACER SACCHARINUM	HALESIA VARIETIES	PRUNUS VARIETIES
BETULA VARIETIES	ILEX X FOESTERII	PYRUS VARIETIES
CARPINUS VARIETIES	ILEX NELLE STEVENS	QUERCUS VARIETIES (NOT Q. PALUSTRIS)
CEDRUS DEODARA	ILEX OPACA	SALIX WEEPING VARIETIES
CELTIS VARIETIES	JUNIPERUS VIRGINIANA	SORBUS VARIETIES
CERCIDIPHYLLUM VARIETIES	KOELERUTERA PANICULATA	TAXODIUM VARIETIES
CORNUS VARIETIES	LIQUIDAMBAR VARIETIES	TAXUS B. REPANDENS
CRATAEGUS VARIETIES	LIRIODENDRON VARIETIES	TILIA TOMENTOSA VARIETIES
	MALUS IN LEAF	ULMUS PARVIFOLIA VARIETIES
	NYSSA SYLVATICA	ZELKOVA VARIETIES
- IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.
- DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.
- THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.
- A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.
- MAINTENANCE SHALL INCLUDE BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYNS IF ORIGINALLY REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
- MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DIRECTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS, AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS.
- GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING.
- SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.
- LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OF A WATERING TRUCK OR OTHER ACCEPTABLE GADGET.
- THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL.
- IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND ESTABLISHMENT.

**PLANT MATERIAL GUARANTEE NOTES:**

- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR (1 YR) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE.
- THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS.
- ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
- THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

**LAWN (SEED OR SOD) NOTES:**

- SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
- SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND FOR USE FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS. MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.
- REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEED OR LAID WITH SOD.
- SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION".
- PROTECT LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS, EROSION, WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

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**LAND DEVELOPMENT PLANS**

**PRIMROSE SCHOOLS FRANCHISING COMPANY**

PROPOSED CHILD DAY CARE FACILITY

PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
MIDDLESEX COUNTY, MASSACHUSETTS

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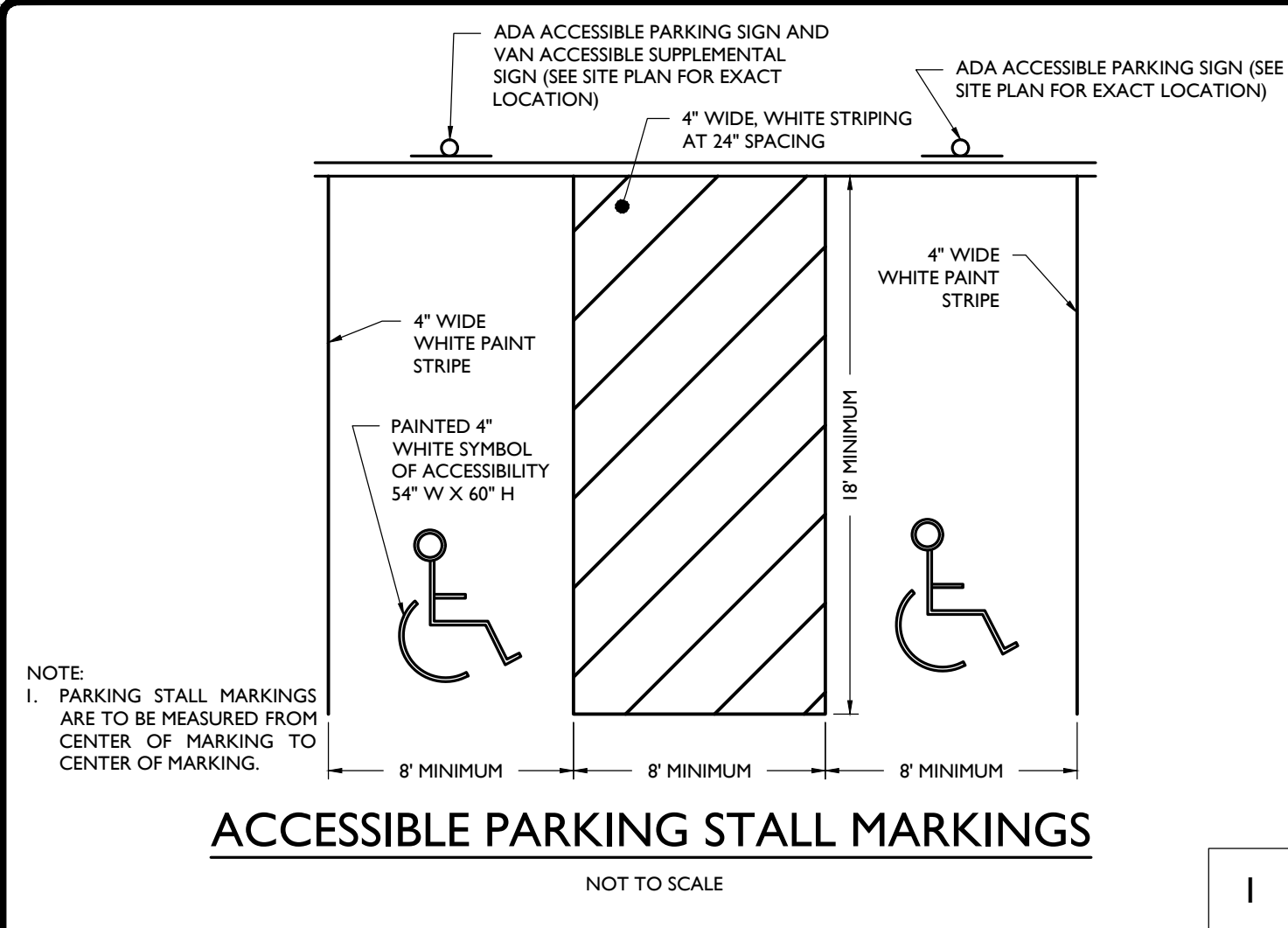
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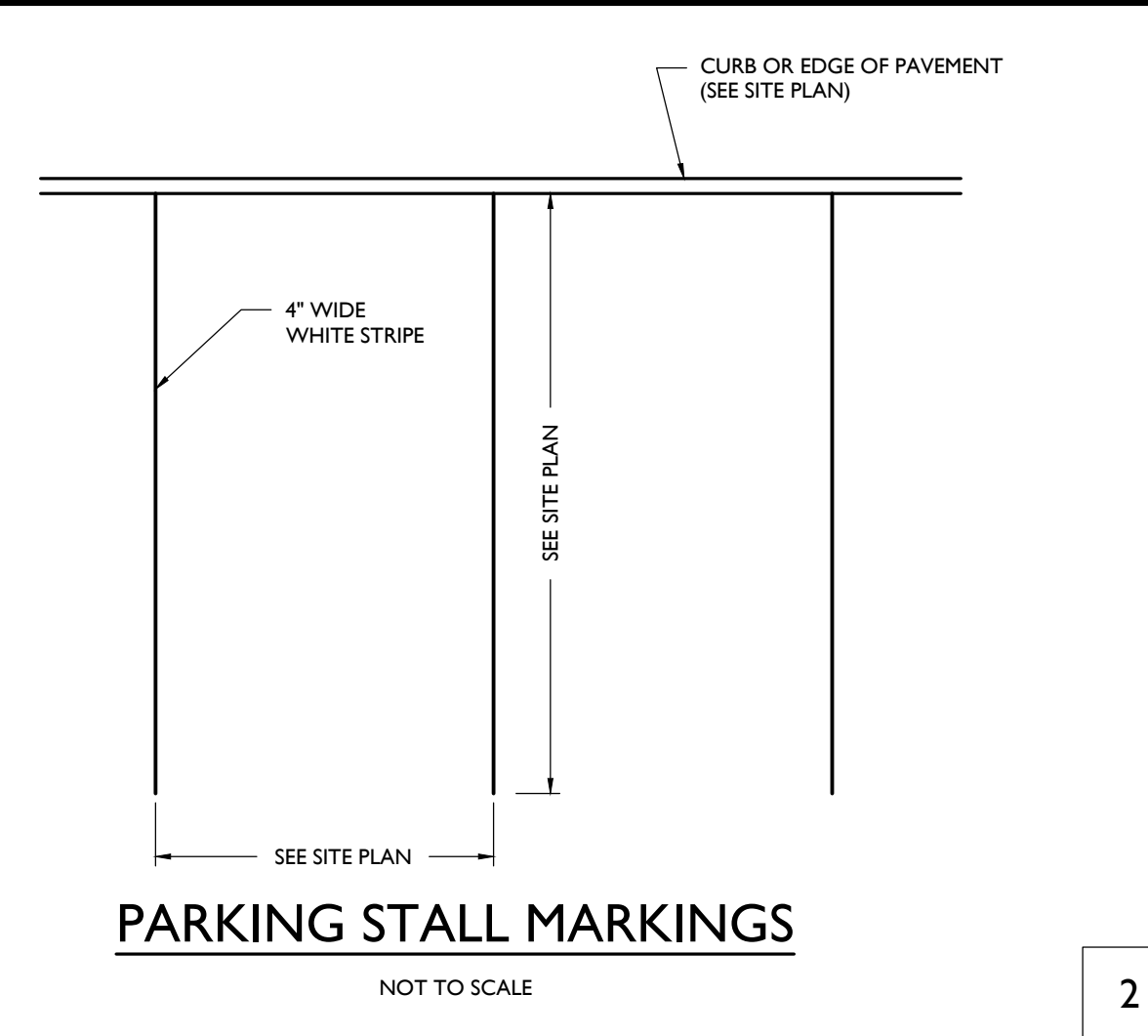
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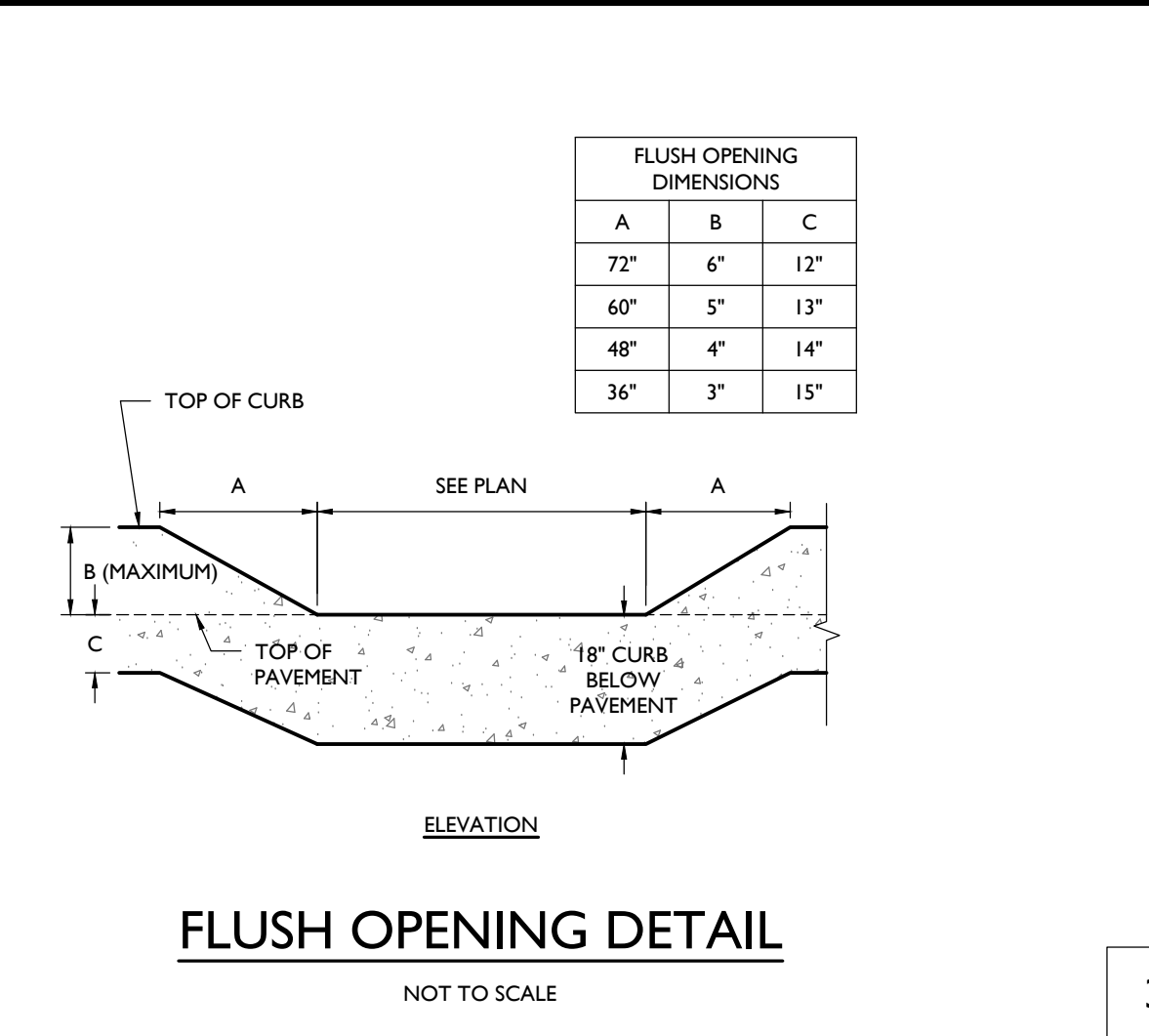
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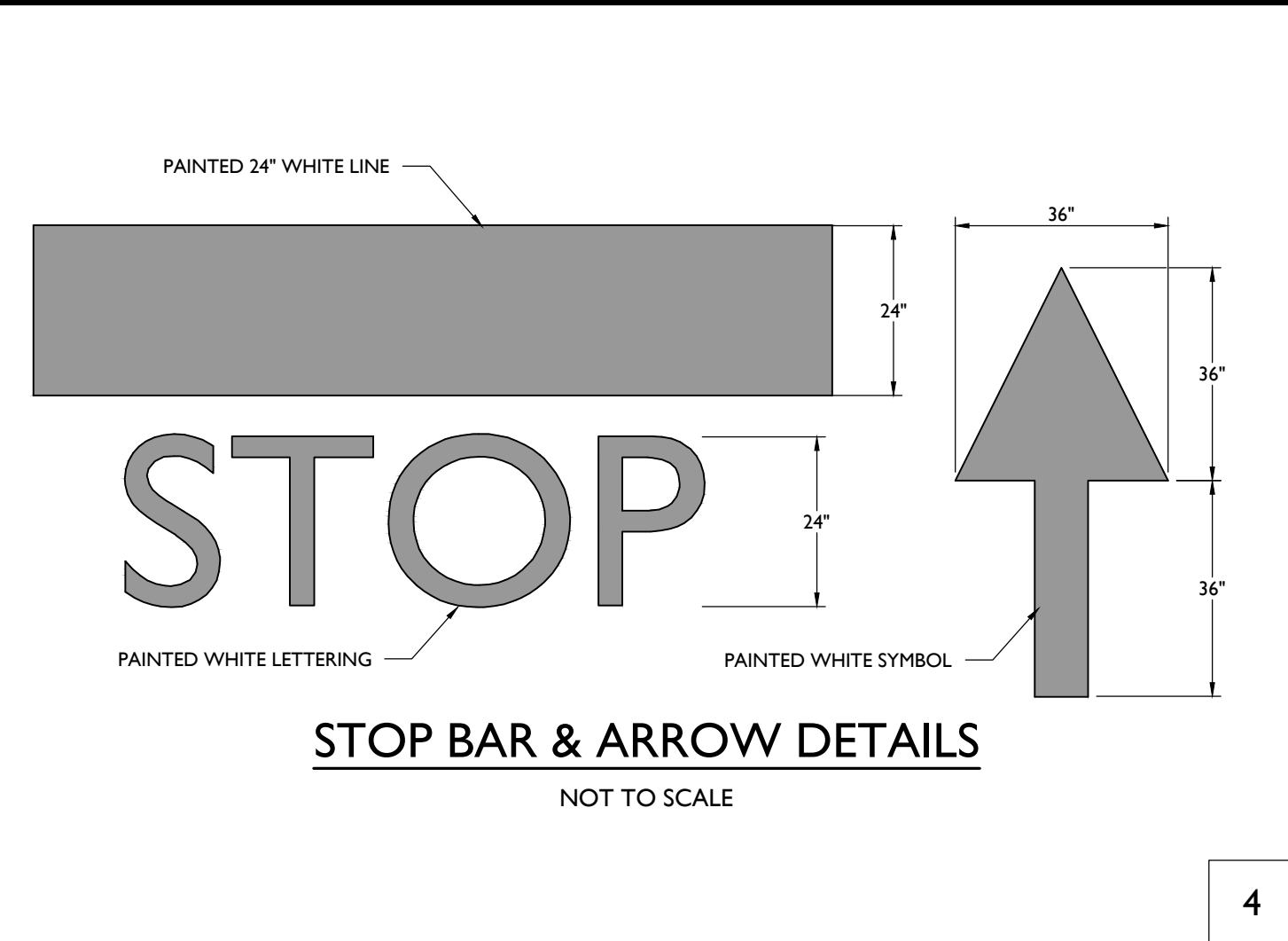
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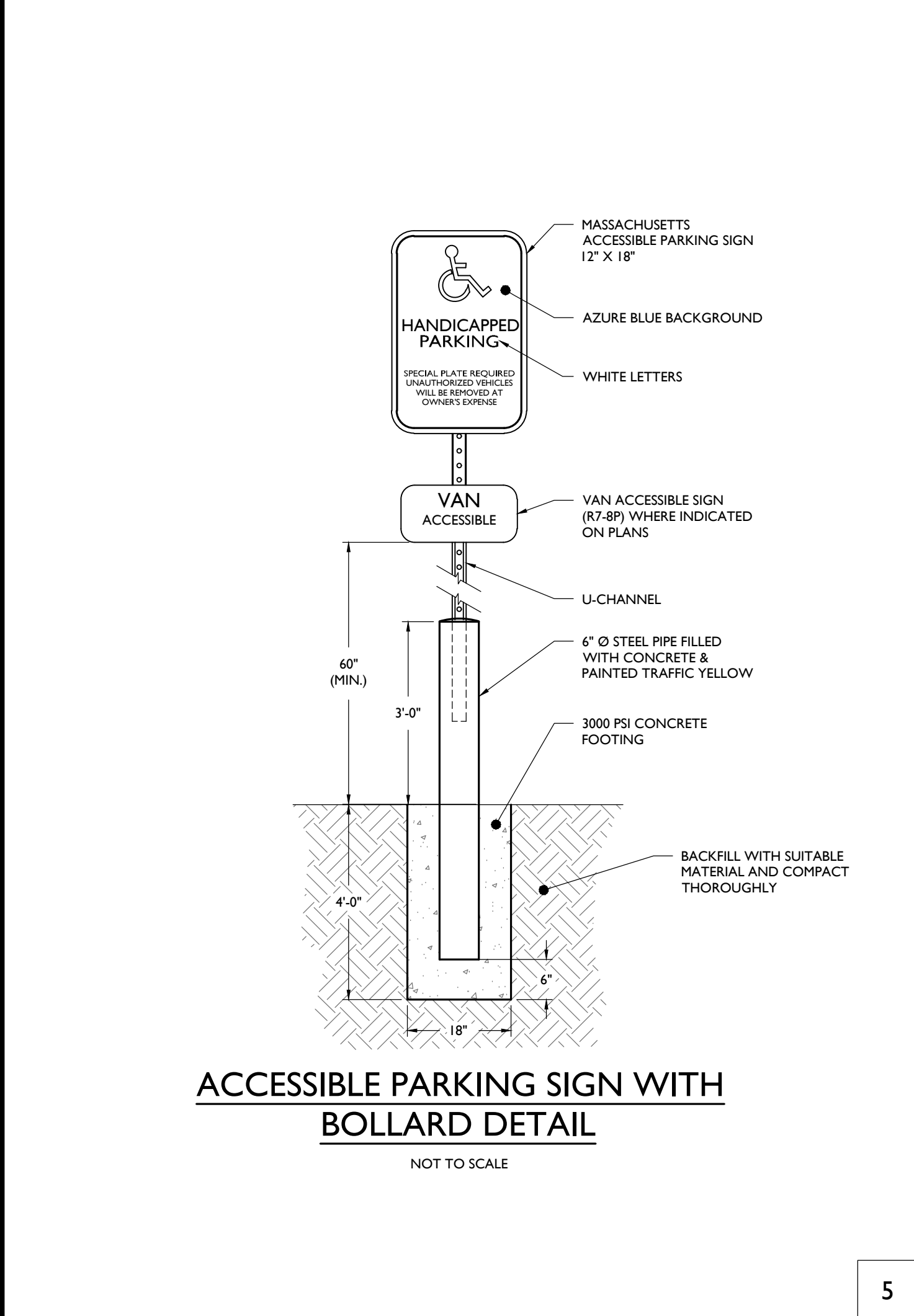
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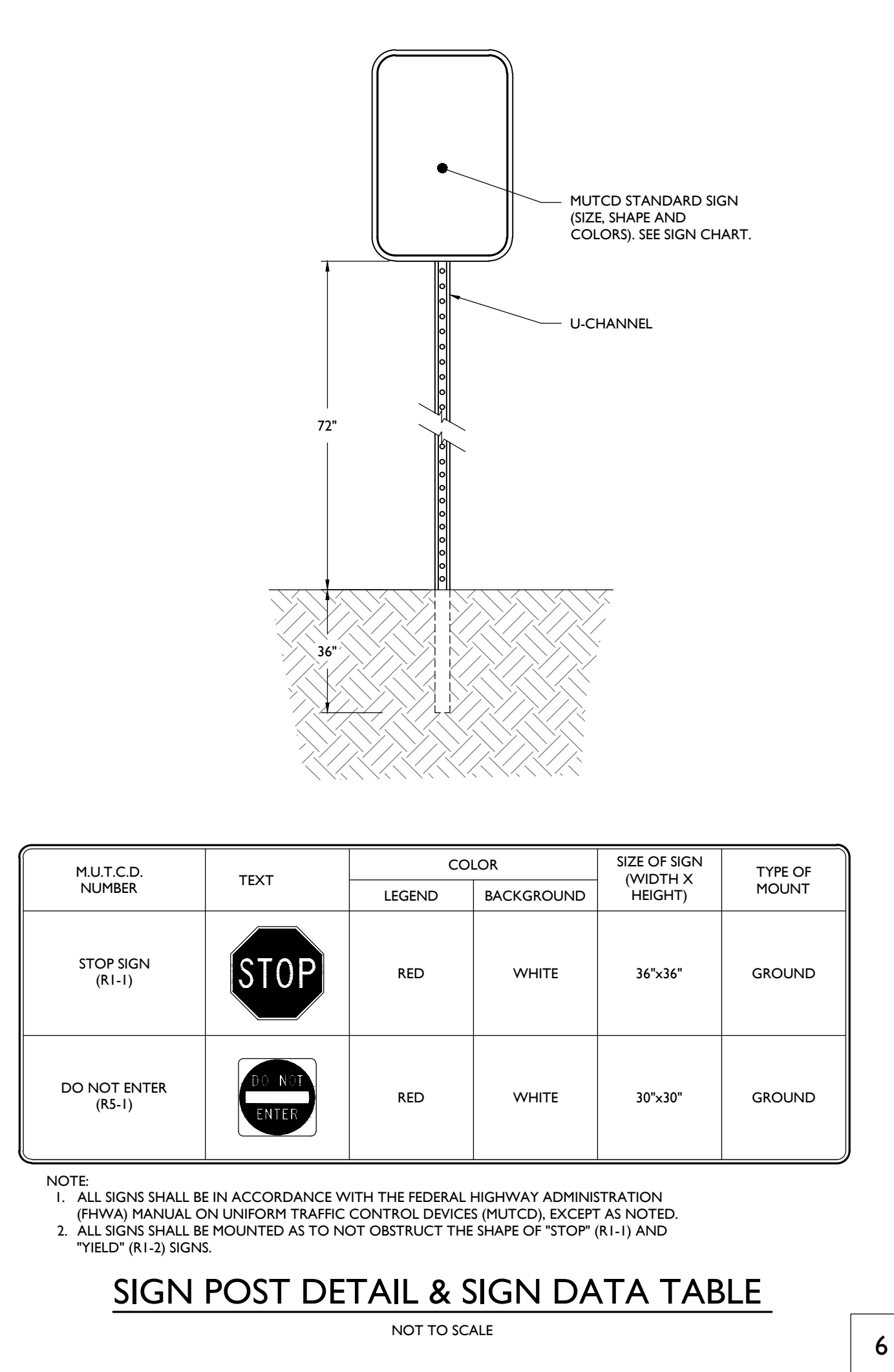
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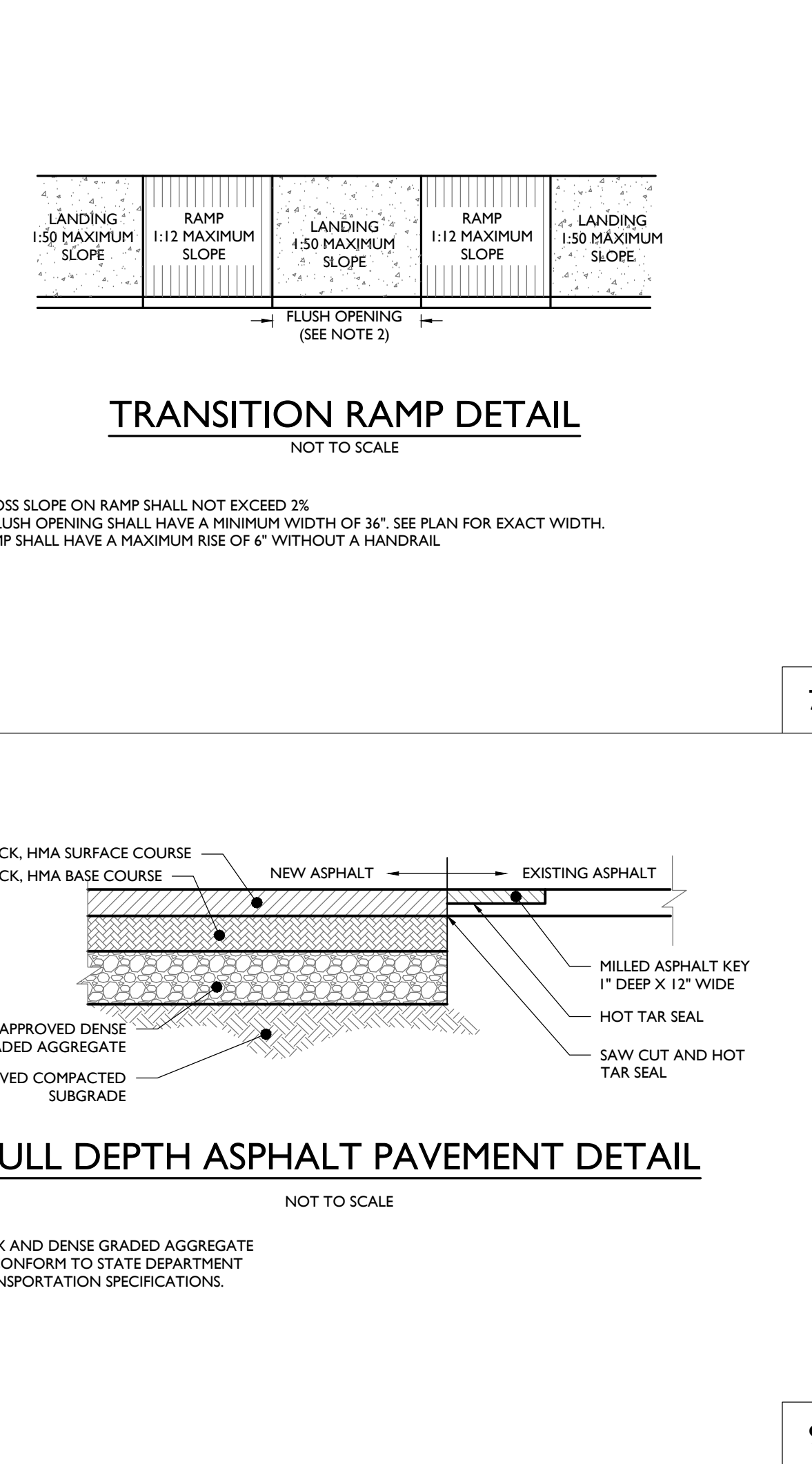
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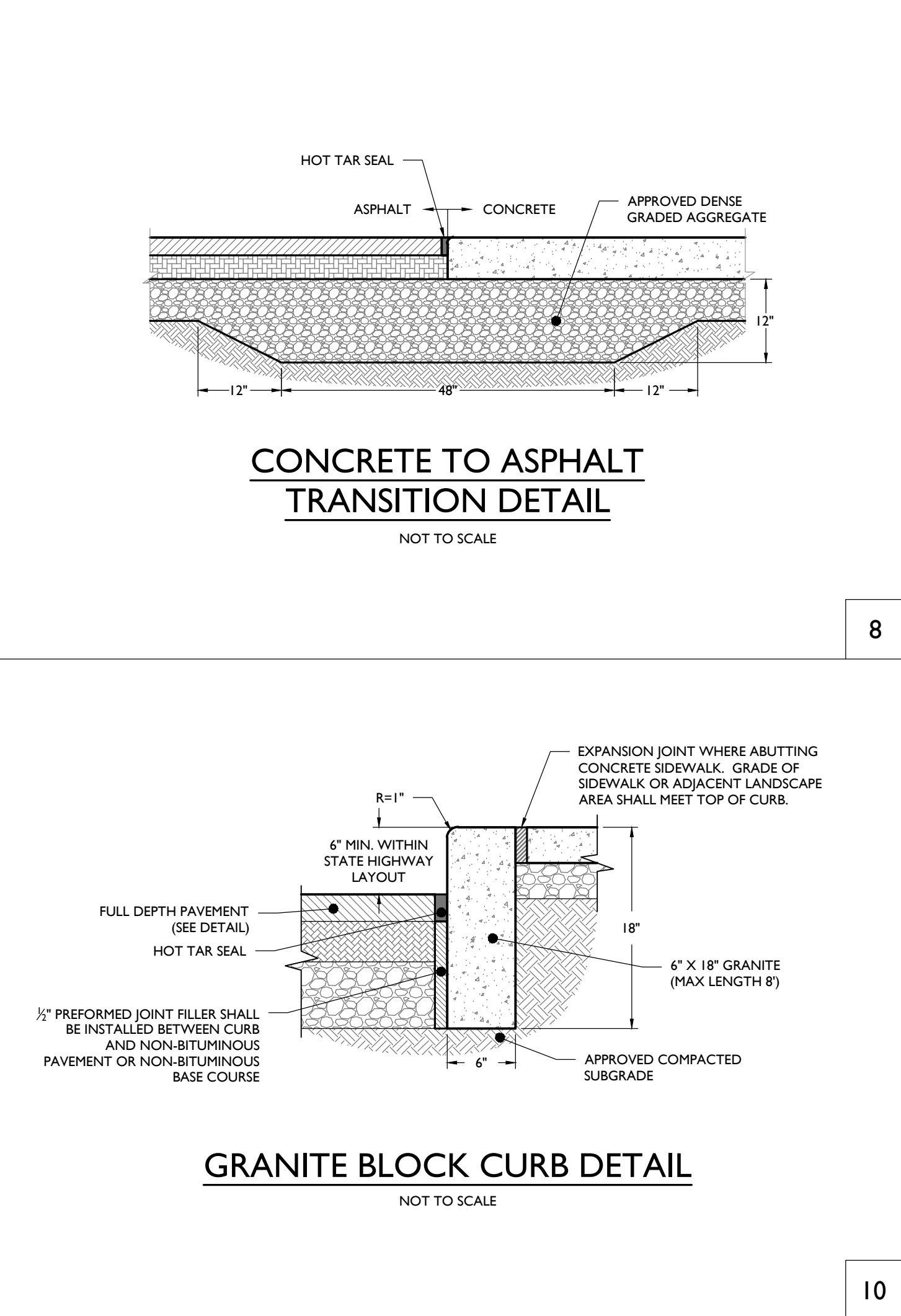
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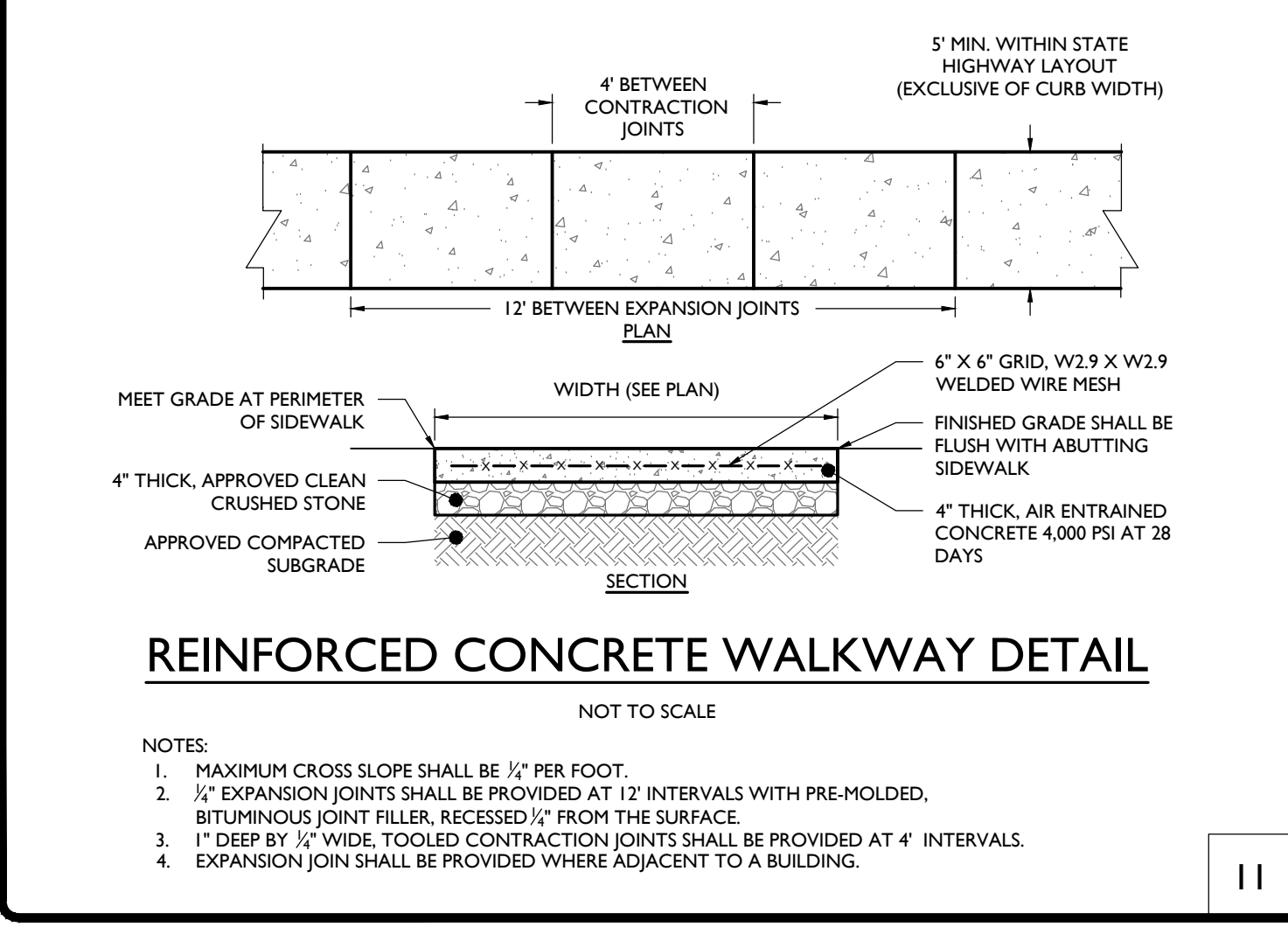
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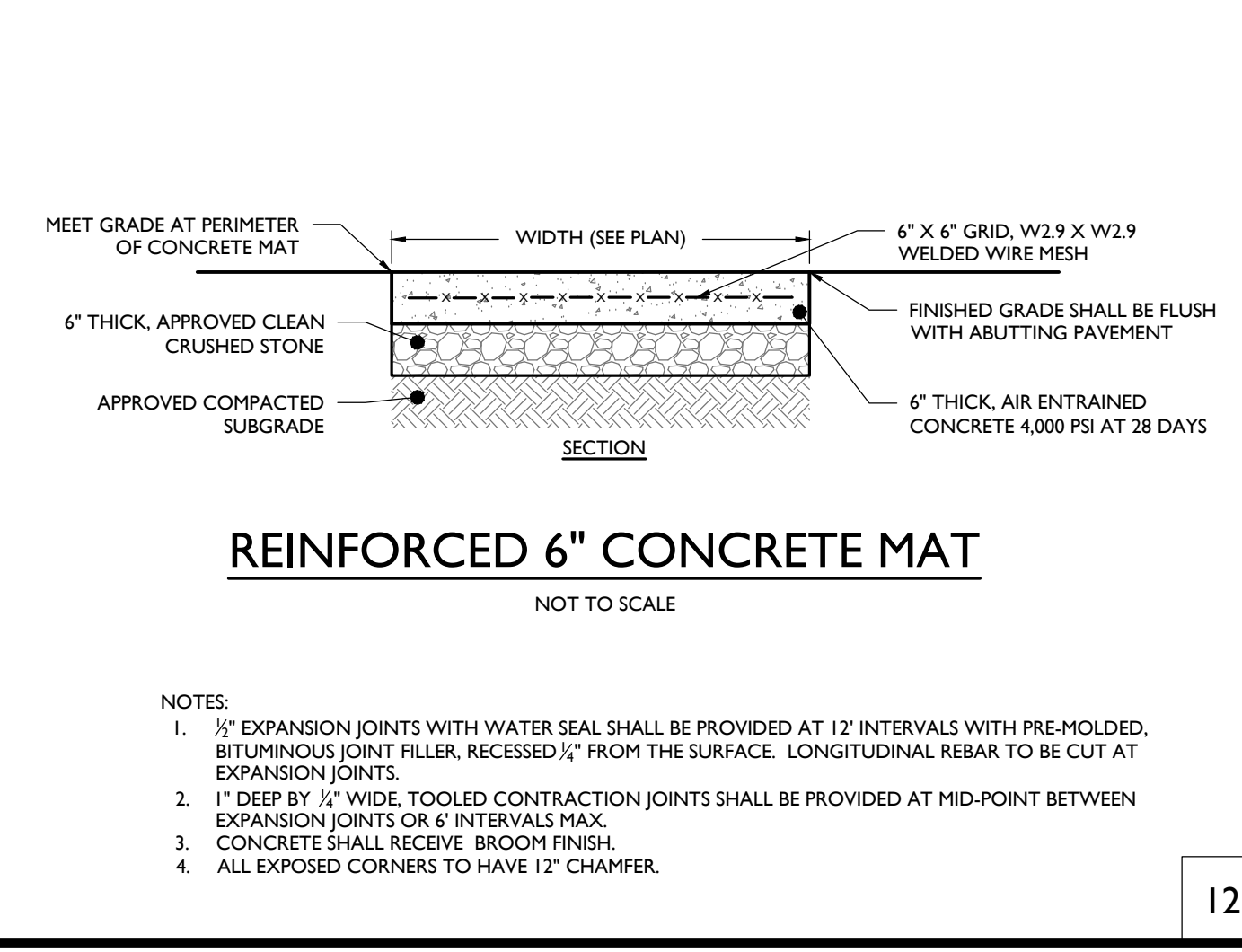
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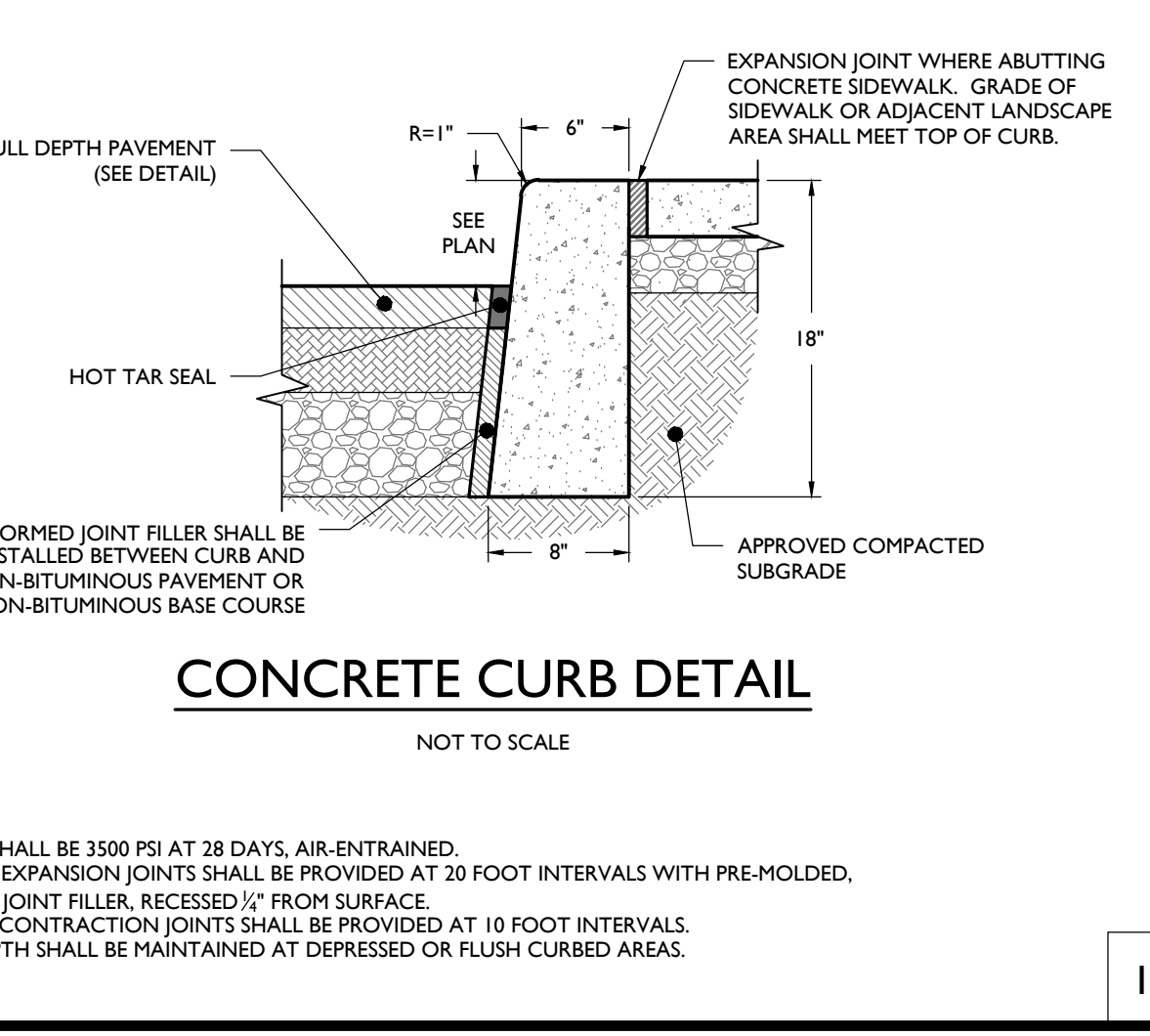
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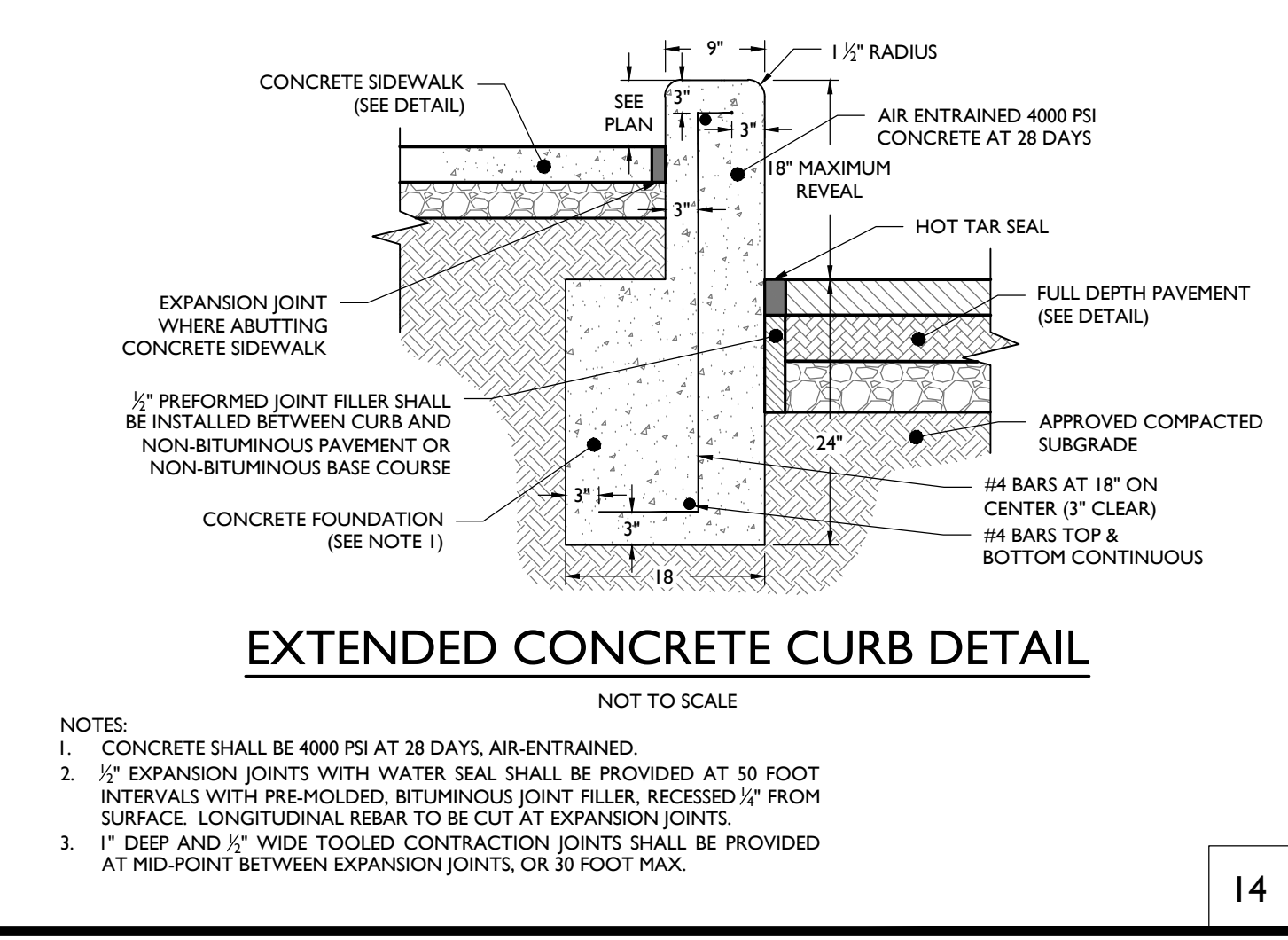
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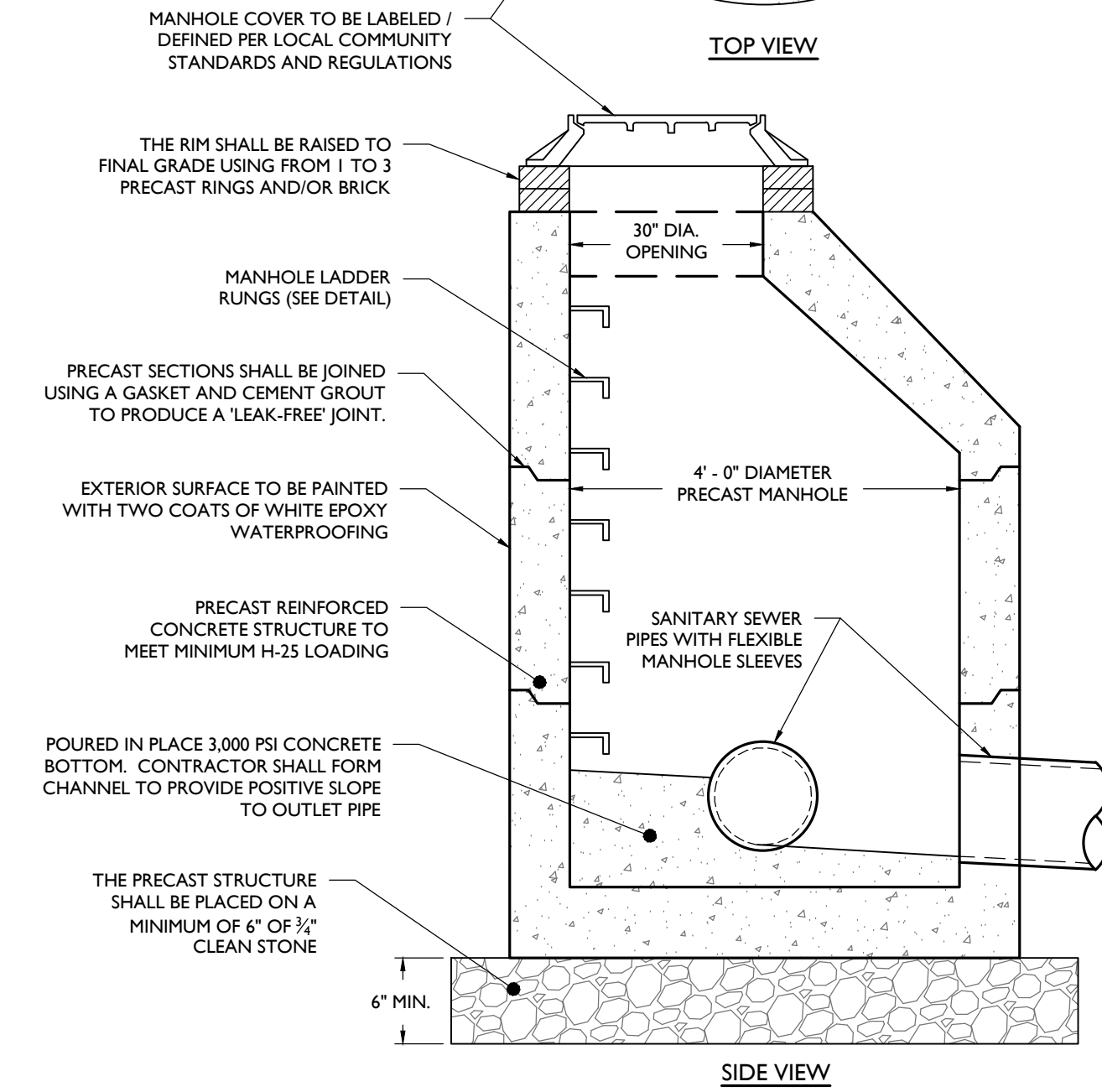
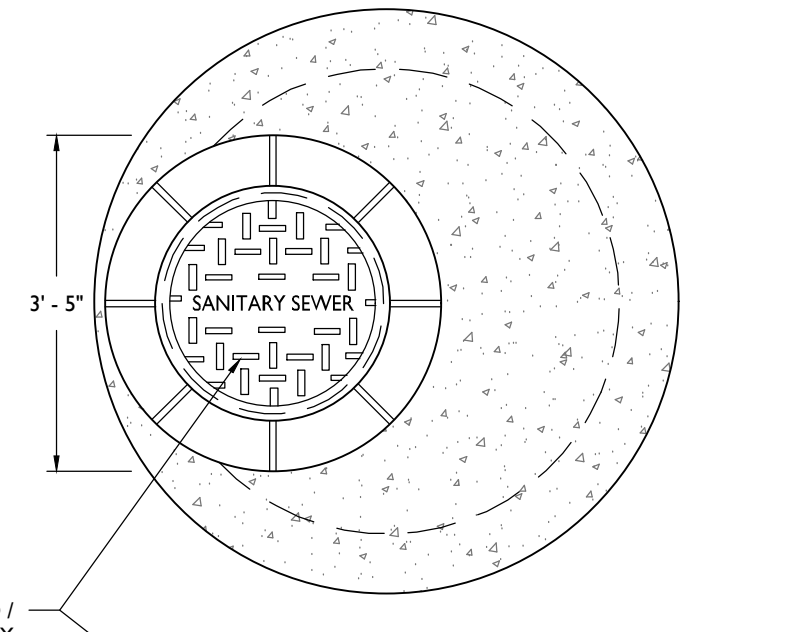
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- NOTES:
- STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE
  - FRAME AND COVER TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.
  - ALL JOINTS TO BE WATER-TIGHT.
  - SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.

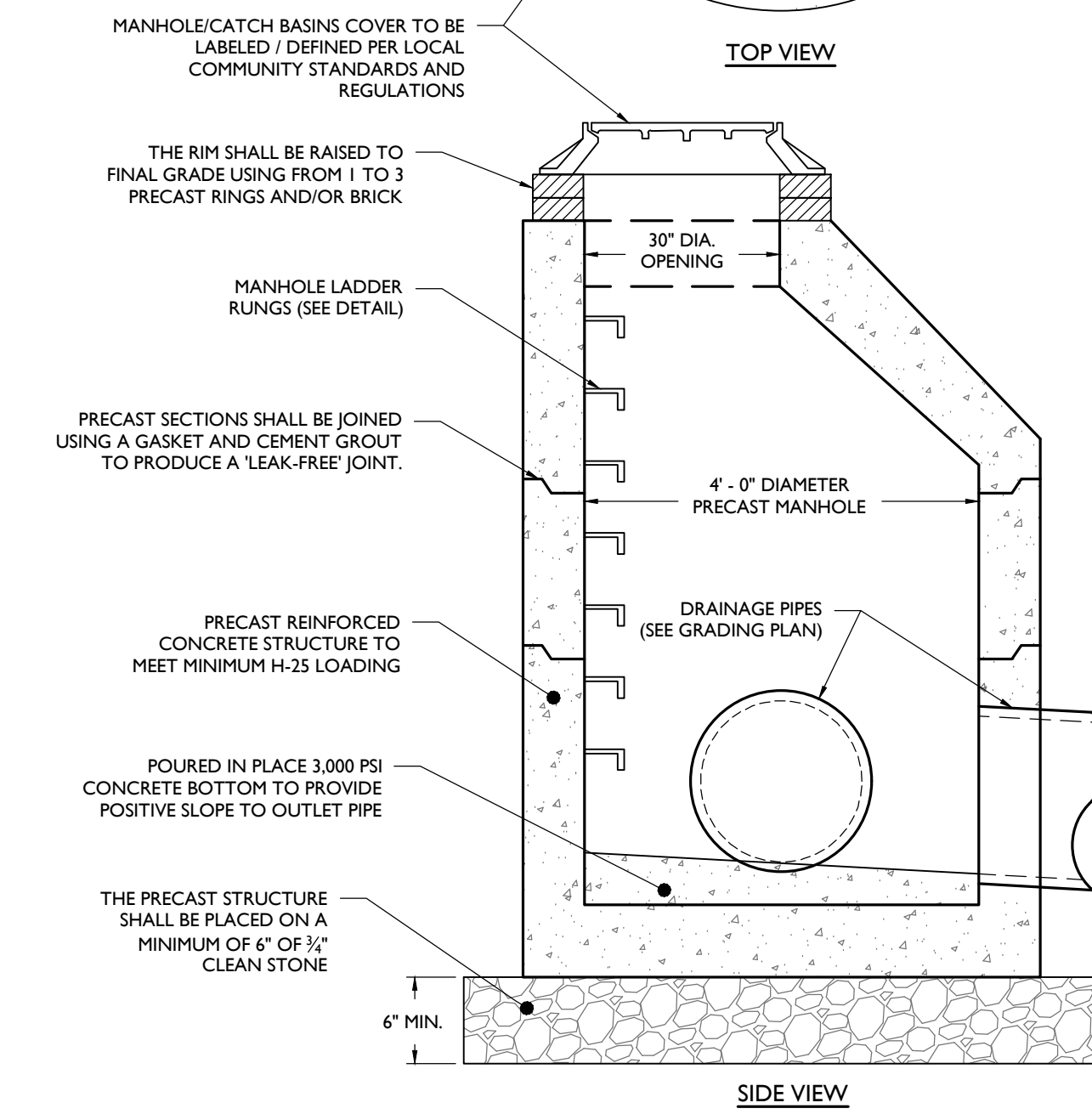
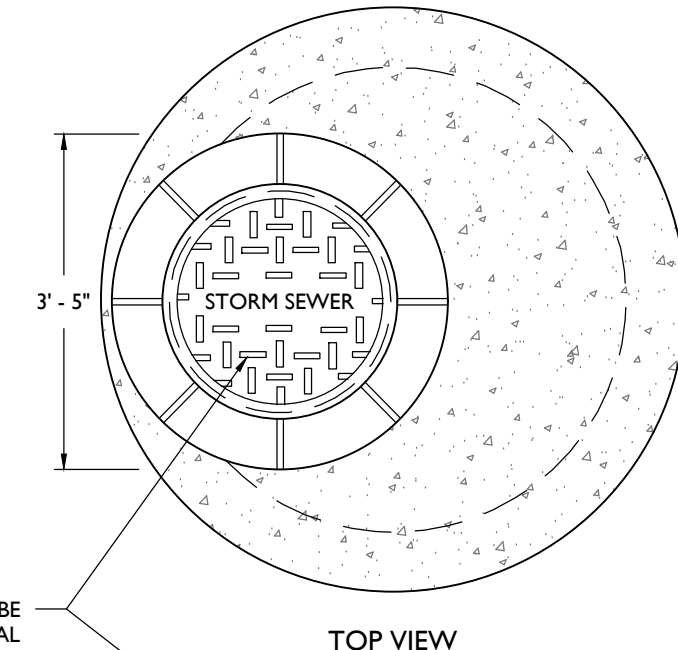


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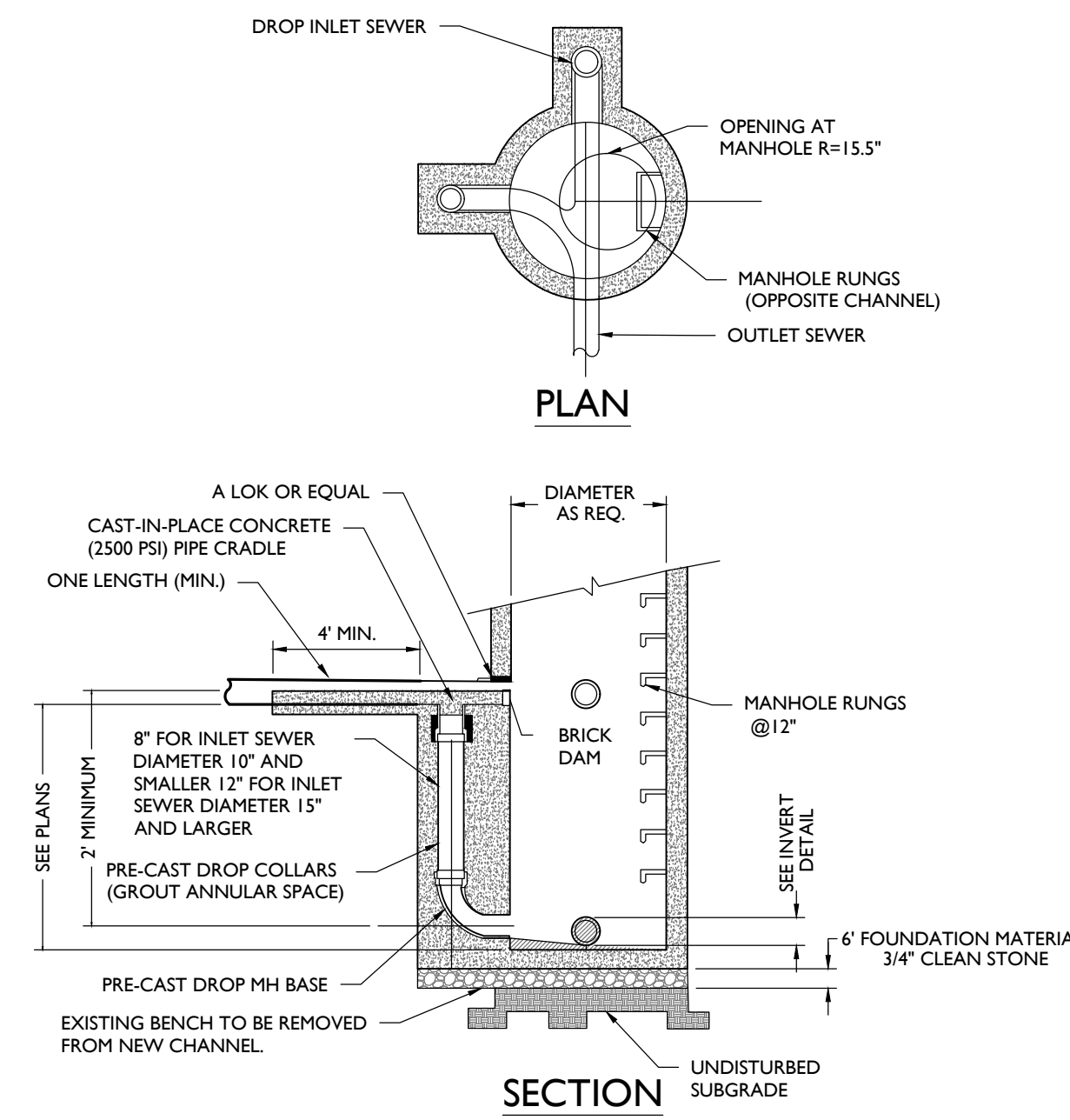
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  - ALL JOINTS TO BE WATER-TIGHT.
  - SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.



**STORM STRUCTURE DETAIL**

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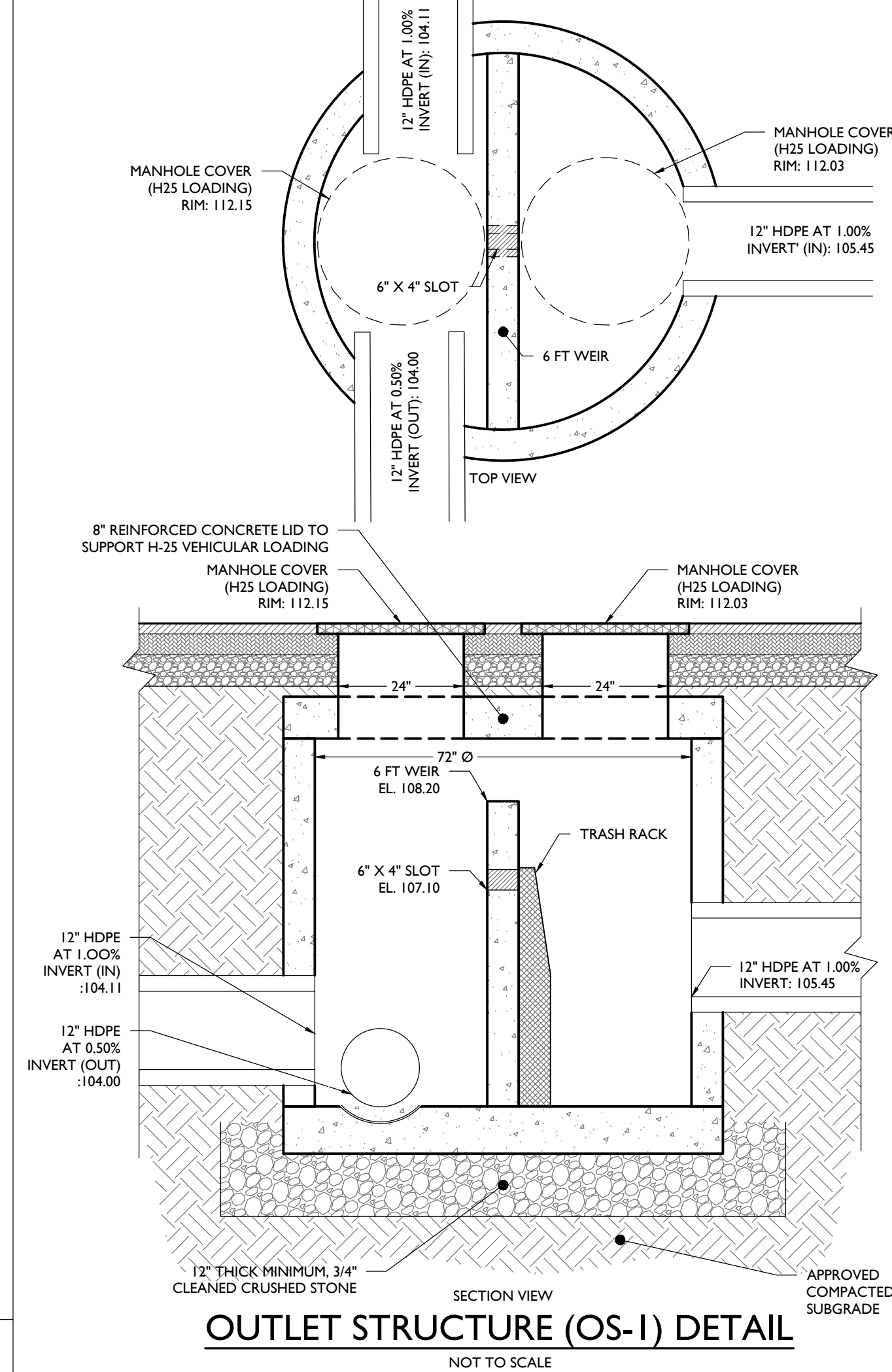
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**DROP CONNECTION**

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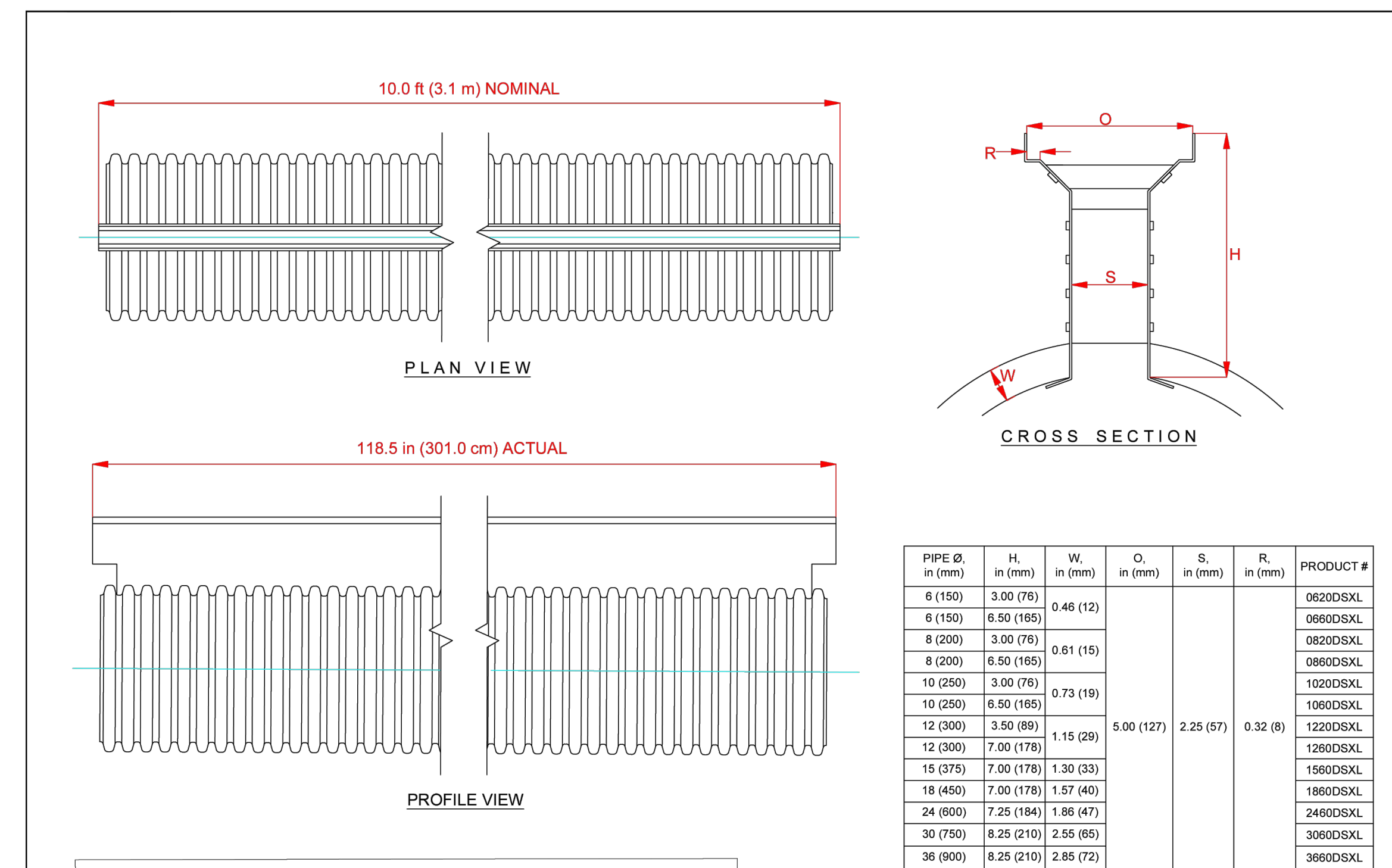
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**OUTLET STRUCTURE (OS-I) DETAIL**

NOT TO SCALE

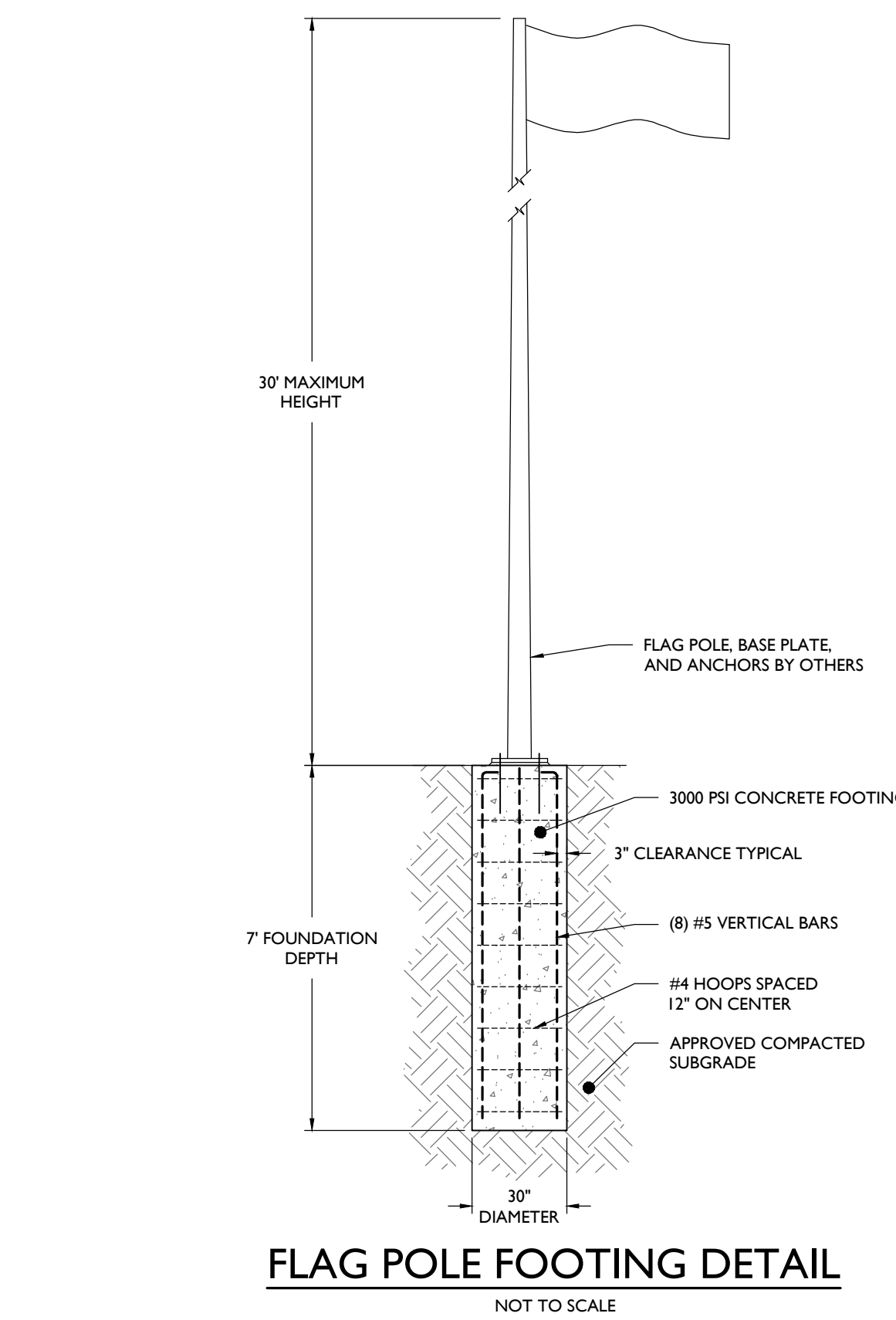
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**ADS DURASLOT XL DETAIL**

NOT TO SCALE

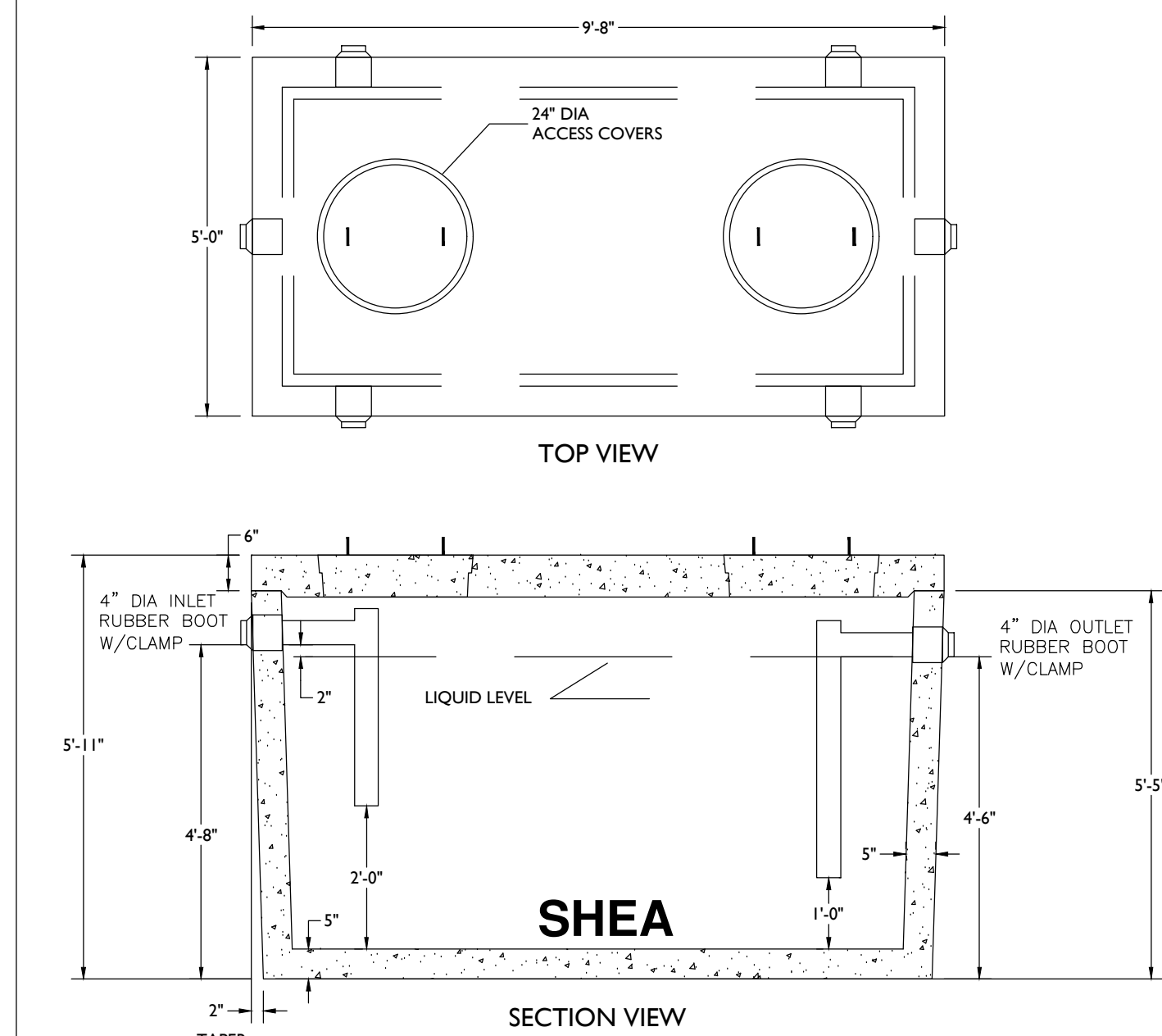
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**FLAG POLE FOOTING DETAIL**

NOT TO SCALE

6



**1,000 GALLON GREASE TRAP DETAIL**

NOT TO SCALE

7

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01	05/06/2025	03/07/2025		
00				ISSUE

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LAND DEVELOPMENT PLANS  
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**FRANCHISING COMPANY**  
PROPOSED CHILD DAY  
CARE FACILITY  
PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
MIDDLESEX COUNTY, MASSACHUSETTS

JOSHUA H. KLINE, P.E.  
MASSACHUSETTS LICENSE No. 53936  
LICENSED PROFESSIONAL ENGINEER

**STONEFIELD**  
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SCALE: AS NOTED PROJECT ID: BOS-240115

TITLE:  
**CONSTRUCTION**  
**DETAILS**

DRAWING:  
**C-13**

Z:\PROJECTS\2025\BOS-240115 PRIMROSE SCHOOLS - 885 MAIN STREET, READING, MA\CAD\DWG\1001-1.DWG

ADVANCED DRAINAGE SYSTEMS, INC. (ADS) HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT. NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

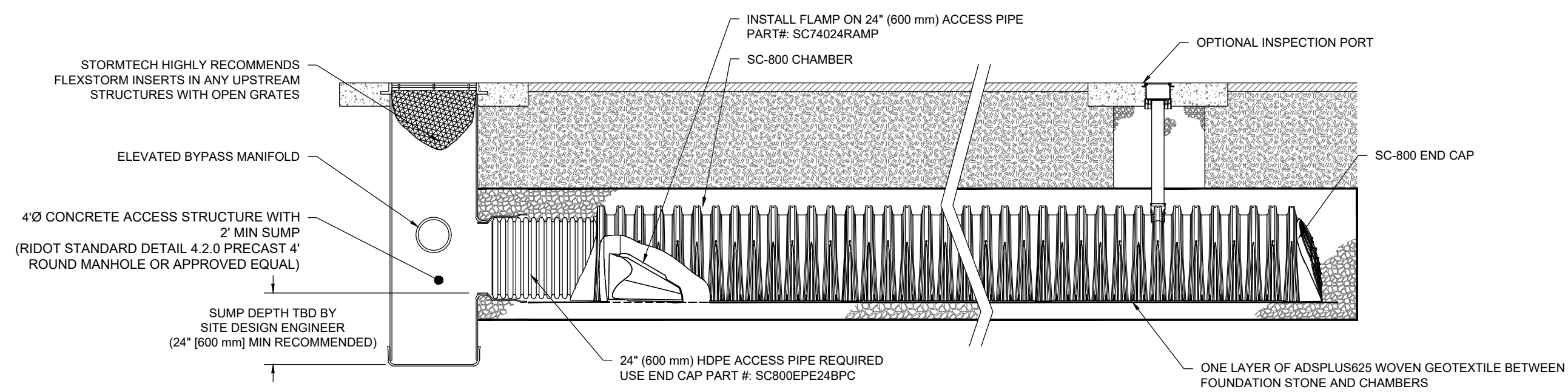
3	Updated Layers & Logo	KJS	01/09/2025		
REV.	DESCRIPTION	BY	MM/DD/YY	CHKD	

Duraslot XL Pipe  
Standard Slot Height

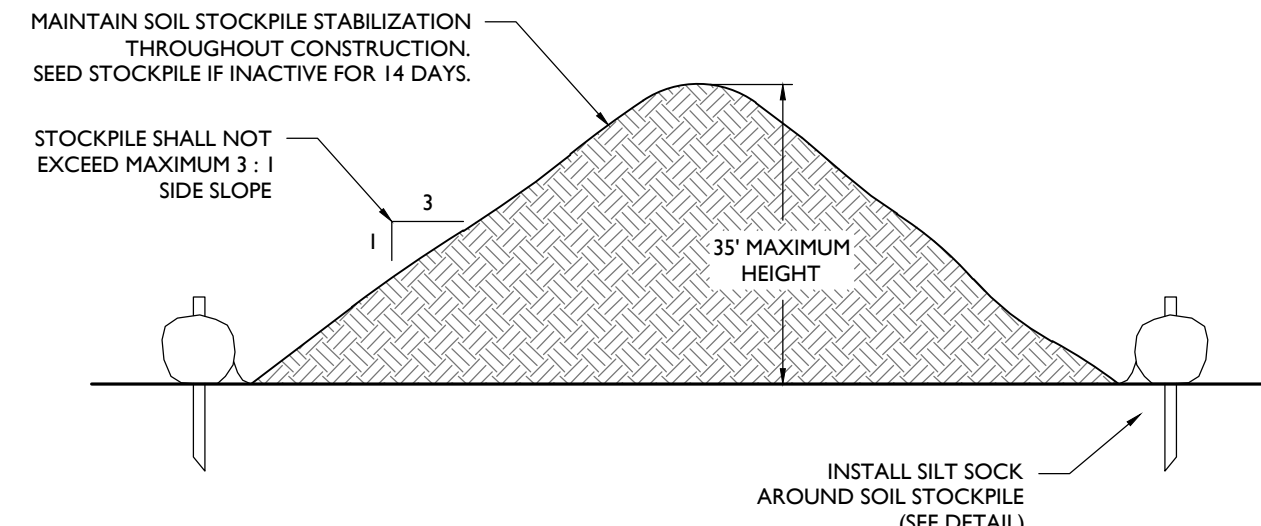
ADS  
4640 TRUEMAN BLVD  
HILLIARD, OHIO 43026

DRAWING NUMBER: STD-1400B

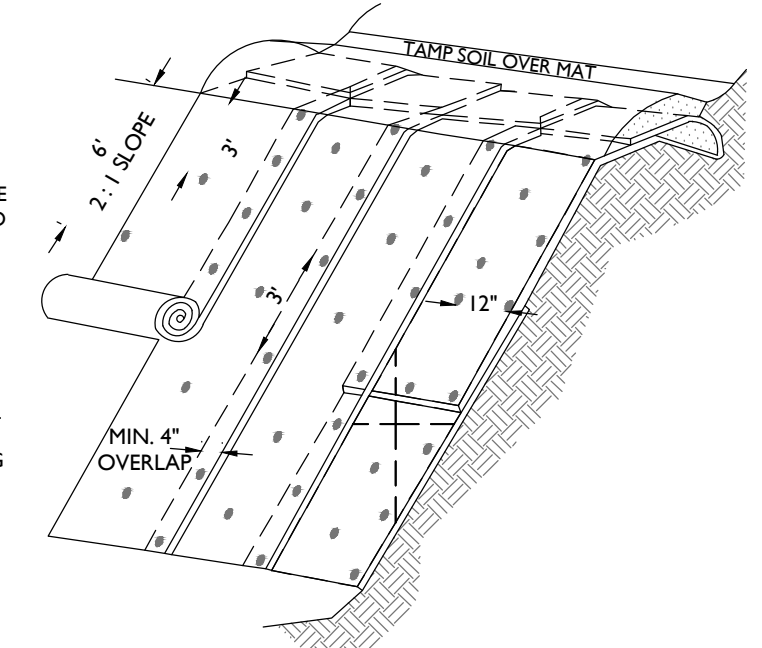
DATE: 04-18-2023  
SCALE: NTS  
SHEET: 1 OF 1



**SC-800 ISOLATOR ROW PLUS DETAIL**  
NOT TO SCALE



**SOIL STOCKPILE DETAIL**  
NOT TO SCALE

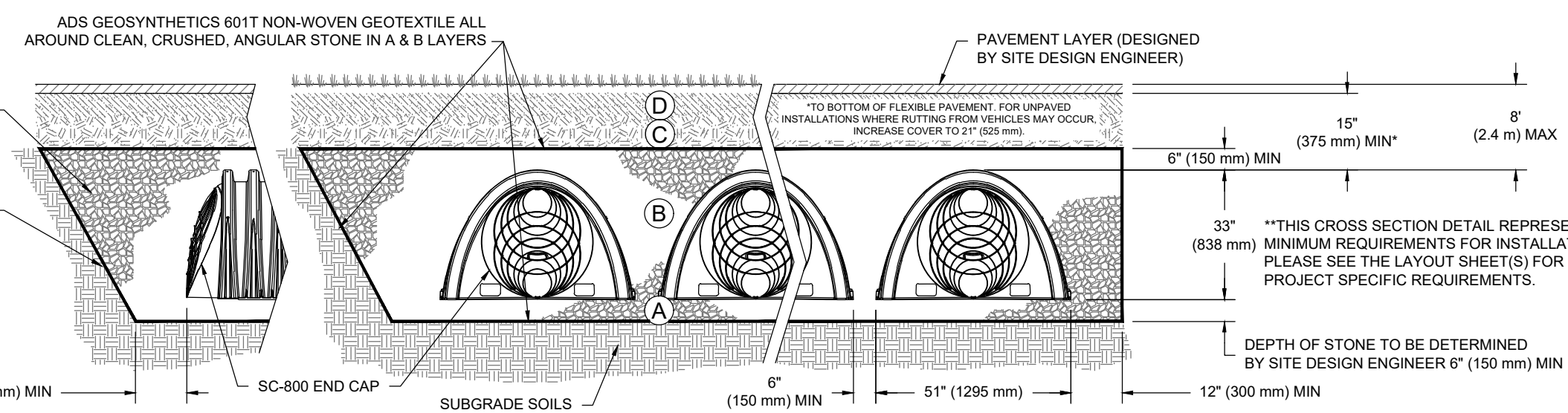


**ENKAMAT DETAIL**  
NOT TO SCALE

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

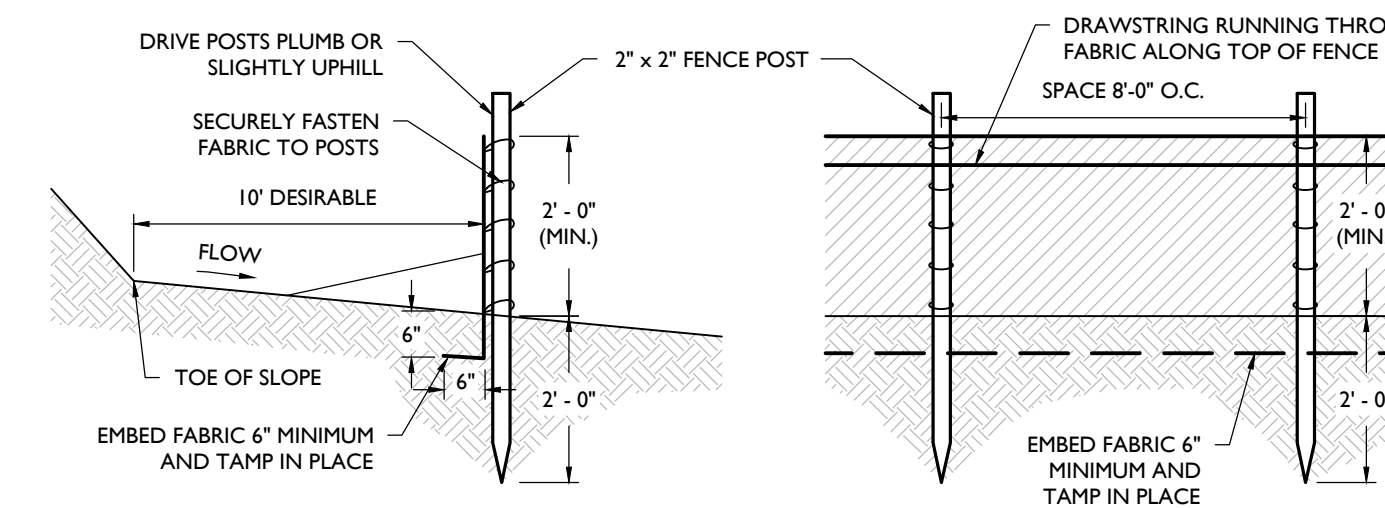
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN)
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>1</sup>	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>2</sup>	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

PLEASE NOTE:  
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."  
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.  
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.  
 4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.  
 5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



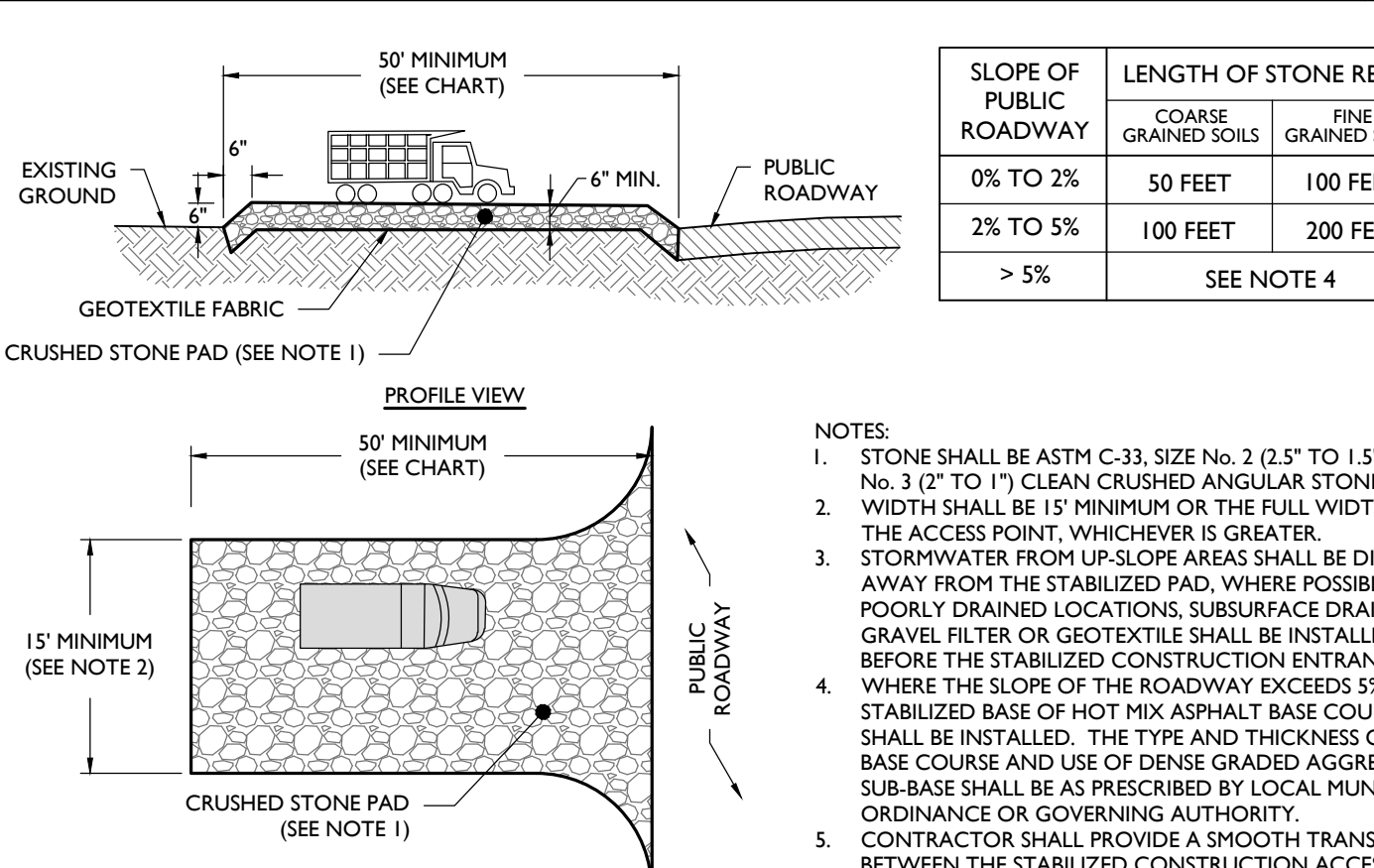
**SC-800 CROSS SECTION DETAIL**  
NOT TO SCALE

**NOTES:**  
 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".  
 2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".  
 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.  
 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.  
 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:  
 • TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.  
 • TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".  
 • TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT<sup>2</sup>, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



**SILT FENCE DETAIL**  
NOT TO SCALE

**NOTES:**  
 1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.  
 2. GEOTEXTILE FABRIC TO BE EMBEDDED 6" (MIN.) AND TAMP IN PLACE.  
 3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.  
 4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.  
 5. SILT FENCE SHALL BE CLEANED AND SEDIMENTS REMOVED AND PROPERLY DISPOSED OF ONCE SEDIMENT ACCUMULATION REACHES 1/2 TO THE HEIGHT OF THE FENCE. FENCE SHALL BE REPAIRED AND/OR REPLACED AS NEEDED.

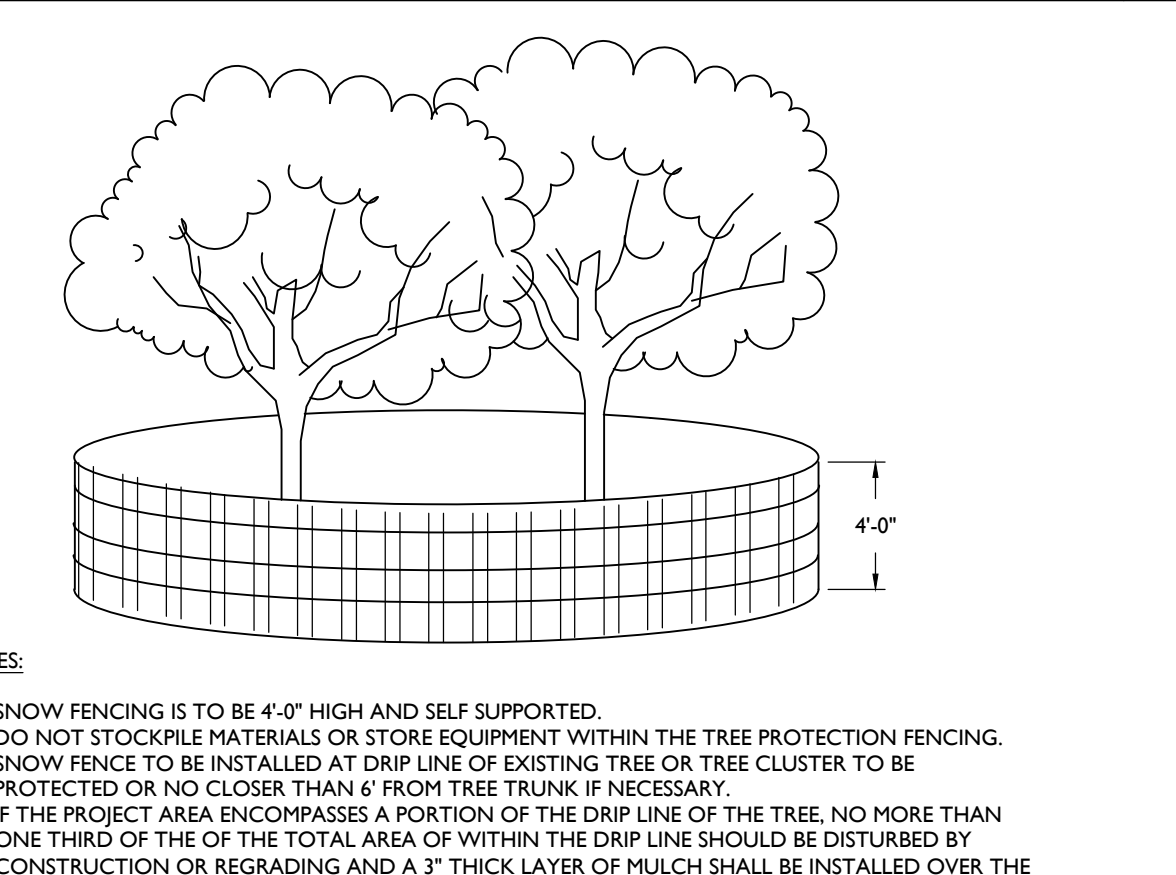


**STABILIZED CONSTRUCTION ACCESS DETAIL**  
NOT TO SCALE

**NOTES:**  
 1. STONE SHALL BE ASTM C-33, SIZE No. 2 (2.5" TO 1.5") OR No. 3 (2" TO 1") CLEAN CRUSHED ANGULAR STONE.  
 2. WIDTH SHALL BE 15" MINIMUM OR THE FULL WIDTH OF THE ACCESS POINT, WHICHEVER IS GREATER.  
 3. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD, WHERE POSSIBLE. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE THE STABILIZED CONSTRUCTION ENTRANCE.  
 4. WHERE THE SLOPE OF THE ROADWAY EXCEEDS 5% A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR GOVERNING AUTHORITY.  
 5. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ACCESS AND THE PUBLIC ROADWAY.

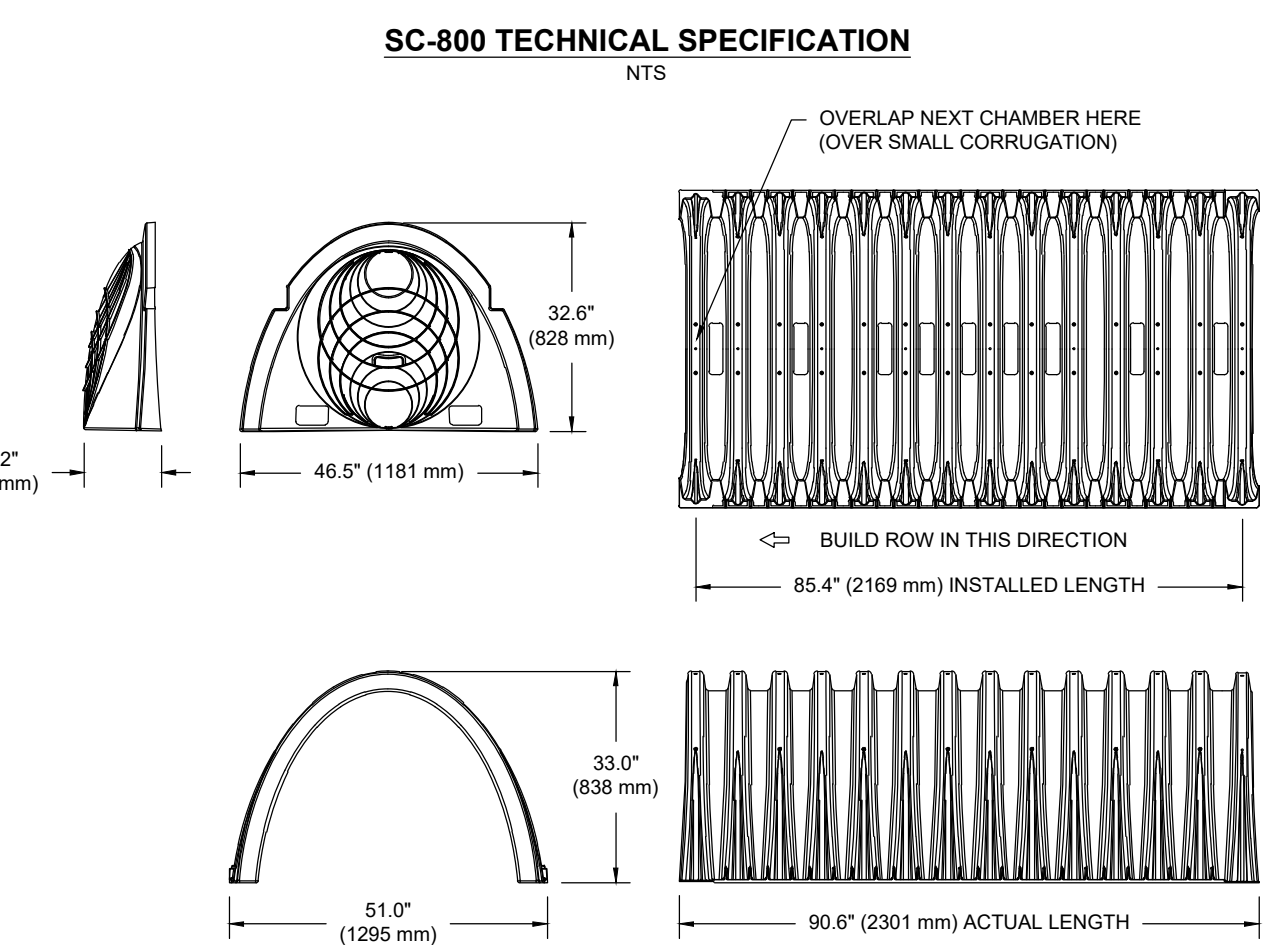
**INSPECTION & MAINTENANCE**  
 STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT  
 A. INSPECTION PORTS (IF PRESENT)  
 A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN  
 A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED  
 A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG  
 A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)  
 A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.  
 B. ALL ISOLATOR PLUS ROWS  
 B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS  
 B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE  
 i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY  
 ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE  
 B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.  
 STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS  
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED  
 B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN  
 C. VACUUM STRUCTURE SUMP AS REQUIRED  
 STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.  
 STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES:**  
 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.  
 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



**TREE PROTECTION DETAIL**  
NOT TO SCALE

**NOTES:**  
 1. SNOW FENCING IS TO BE 4'-0" HIGH AND SELF SUPPORTED.  
 2. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT WITHIN THE TREE PROTECTION FENCING.  
 3. SNOW FENCE TO BE INSTALLED AT DRIP LINE OF EXISTING TREE OR TREE CLUSTER TO BE PROTECTED OR NO CLOSER THAN 6" FROM TREE TRUNK IF NECESSARY.  
 4. IF THE PROJECT AREA ENCOMPASSES A PORTION OF THE DRIP LINE OF THE TREE, NO MORE THAN ONE THIRD OF THE TOTAL AREA OF WITHIN THE DRIP LINE SHOULD BE DISTURBED BY CONSTRUCTION OR REGRADING AND A 3" THICK LAYER OF MULCH SHALL BE INSTALLED OVER THE AREA OF THE DRIP LINE WHICH IS NOT PROTECTED BY FENCING TO PROVIDE A CUSHION.



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
51.0" X 33.0" X 85.4" (1295 mm X 838 mm X 2169 mm)	80.8 CUBIC FEET (1.43 m <sup>3</sup> )	81.0 CUBIC FEET (2.29 m <sup>3</sup> )	81.8 lbs. (37.1 kg)

**NOMINAL END CAP SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	END CAP STORAGE	MINIMUM INSTALLED STORAGE**	WEIGHT
46.5" X 32.6" X 10.5" (1181 mm X 828 mm X 267 mm)	3.4 CUBIC FEET (0.09 m <sup>3</sup> )	15.4 CUBIC FEET (0.43 m <sup>3</sup> )	15.7 lbs. (7.1 kg)

**PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"**  
**PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TPC"**

PART #	STUB	B	C
SC800PE08TPC	6" (150 mm)	21.4" (544 mm)	—
SC800PE08BPC	—	—	0.9" (23 mm)
SC800PE10TPC	8" (200 mm)	19.2" (488 mm)	—
SC800PE10BPC	—	—	1.0" (25 mm)
SC800PE12TPC	10" (250 mm)	17.0" (432 mm)	—
SC800PE12BPC	—	—	1.2" (30 mm)
SC800PE14TPC	12" (300 mm)	14.4" (366 mm)	—
SC800PE14BPC	—	—	1.6" (41 mm)
SC800PE15TPC	15" (375 mm)	11.3" (287 mm)	—
SC800PE15BPC	—	—	1.7" (43 mm)
SC800PE18TPC	18" (450 mm)	8.0" (203 mm)	—
SC800PE18BPC	—	—	2.0" (51 mm)
SC800PE24BPC	24" (600 mm)	—	2.3" (58 mm)
SC800PE	NONE	—	—

NOTE: ALL DIMENSIONS ARE NOMINAL

**SC-800 TECHNICAL SPECIFICATIONS**  
NOT TO SCALE



**4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)**  
NOT TO SCALE

**NOTES:**  
 INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

ISSUED FOR TOWN COMMENTS	ISSUED FOR MUNICIPAL SUBMISSION	DATE	BY
01	00	05/06/2025	SCL
		03/07/2025	AJD

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LAND DEVELOPMENT PLANS

**PRIMROSE SCHOOLS**  
FRANCHISING COMPANY

PROPOSED CHILD DAY CARE FACILITY

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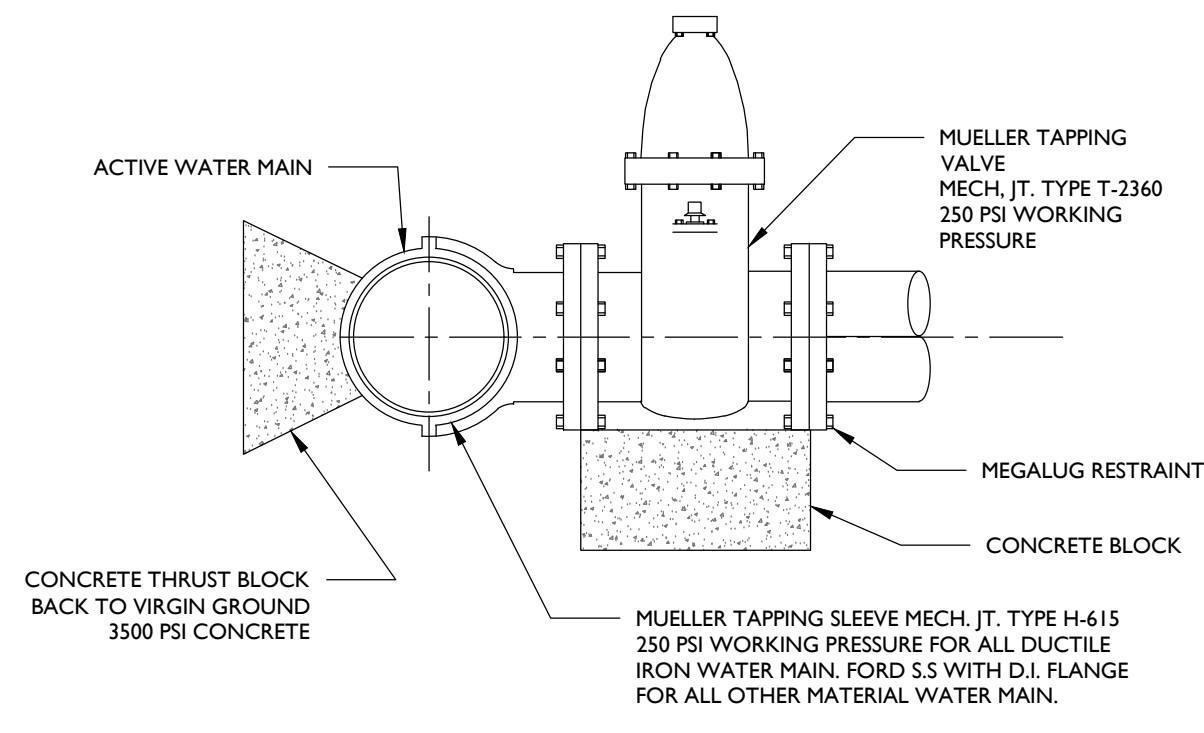
JOSHUA H. KLINE, P.E.  
 MASSACHUSETTS LICENSE No. 53936  
 LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED PROJECT ID: BOS-240115

TITLE: CONSTRUCTION DETAILS

DRAWING: C-14

Z:\PROJECTS\2025\BOS-240115\PRIMROSE SCHOOLS - 885 MAIN STREET, READING, MA\CAD\DWG\01\01-101.DWG

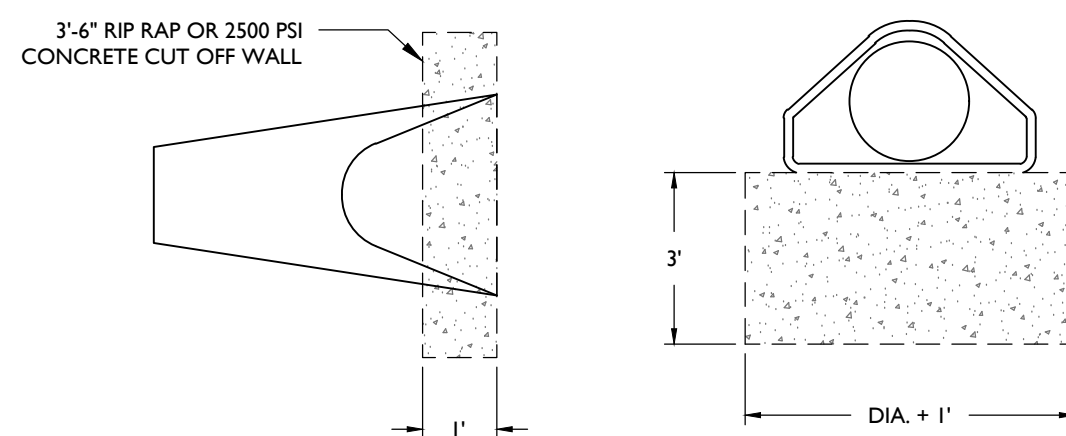


**WET TAP**

NOT TO SCALE

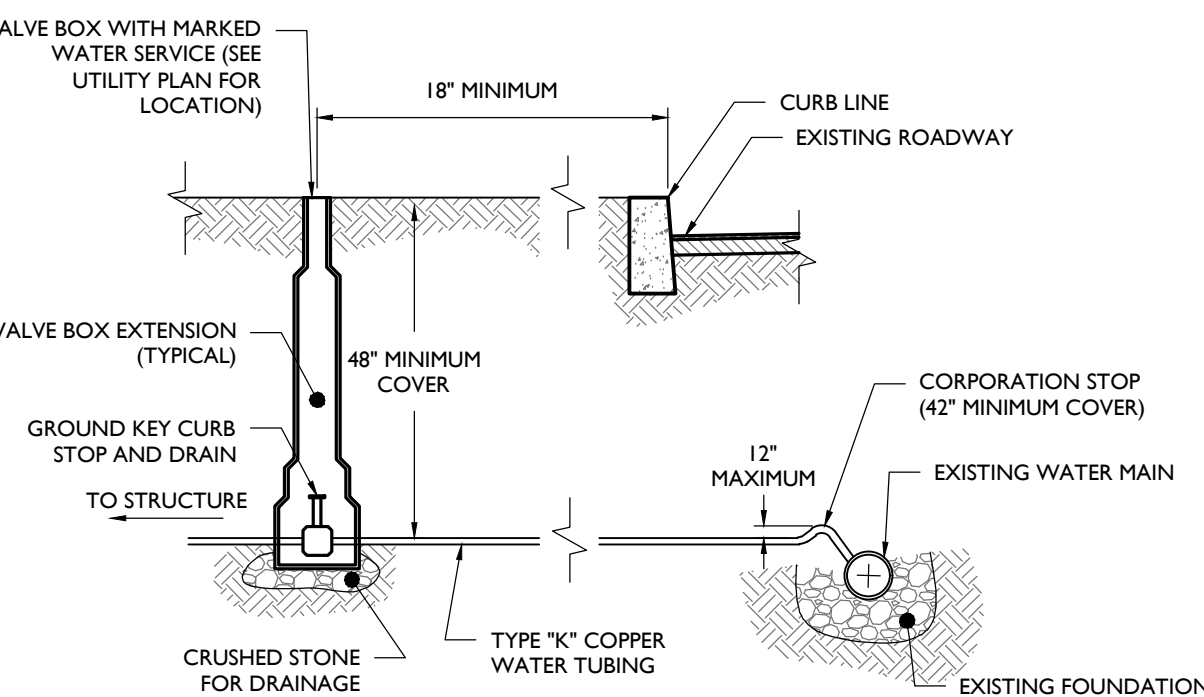
NOTES:

1. ALL NEWLY INSTALLED TAPPING SLEEVES AND TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150 PSI FOR A PERIOD OF THIRTY MINUTES. AT THE END OF THE TEST PERIOD, IF THE TEST PRESSURE HAS REMAINED CONSTANT, THE TAPPING SLEEVE AND AND VALVE SHALL HAVE PASSED THE TEST.
2. ANY VALVE INSTALLED OUTSIDE OF ASPHALT AREAS MUST BE CONSTRUCTED WITH A 2'x2'x4" CONCRETE COLLAR AROUND IT.



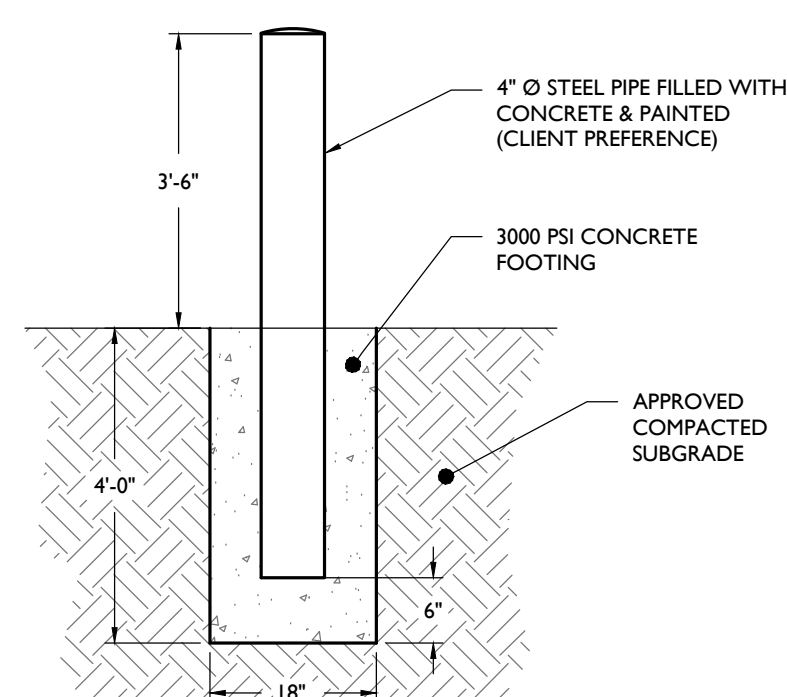
**FLARED END SECTION DETAIL**

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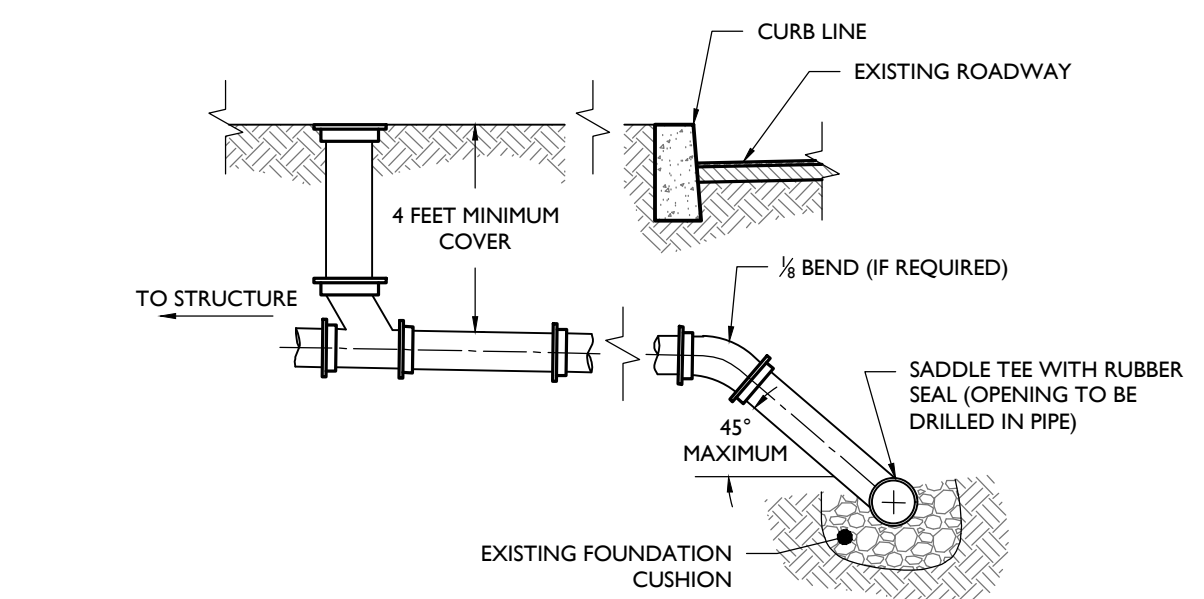
**WATER CONNECTION DETAIL**

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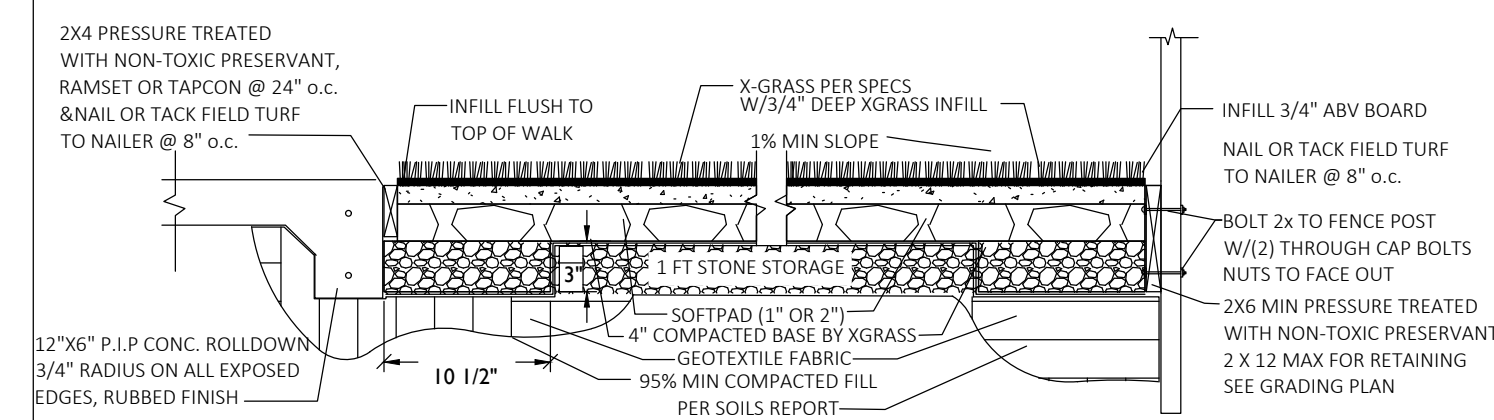


**BOLLARD DETAIL**

NOT TO SCALE

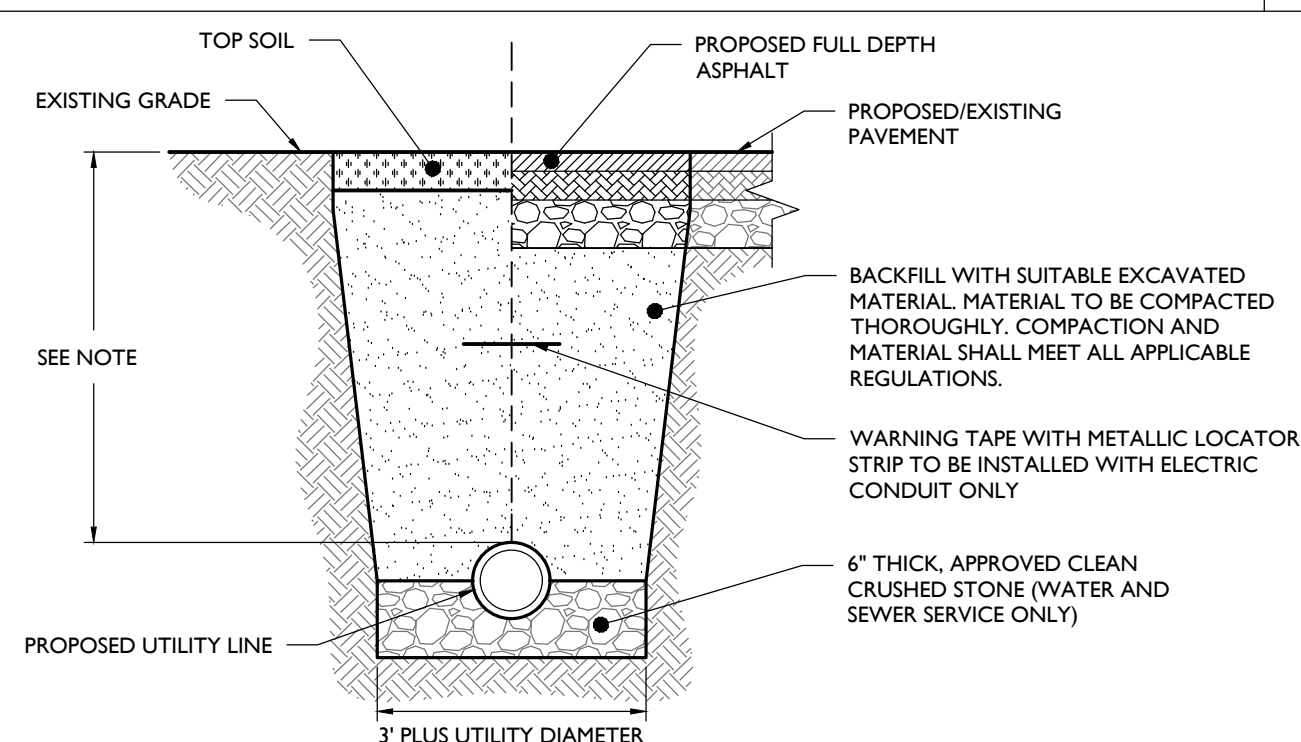


**SEWER CONNECTION DETAIL**



**ARTIFICIAL TURF DETAIL**

NOT TO SCALE

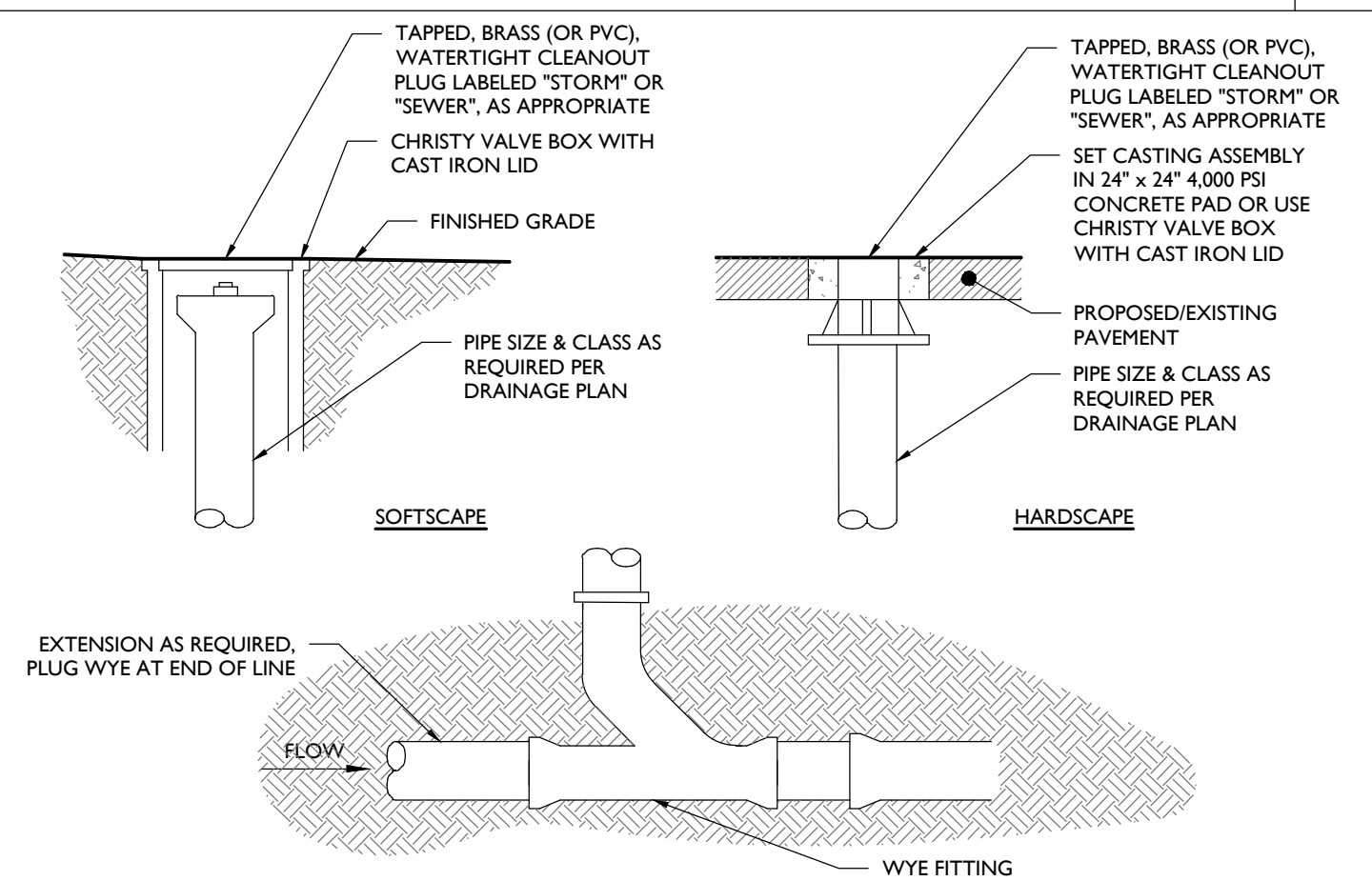


**UTILITY TRENCH DETAIL**

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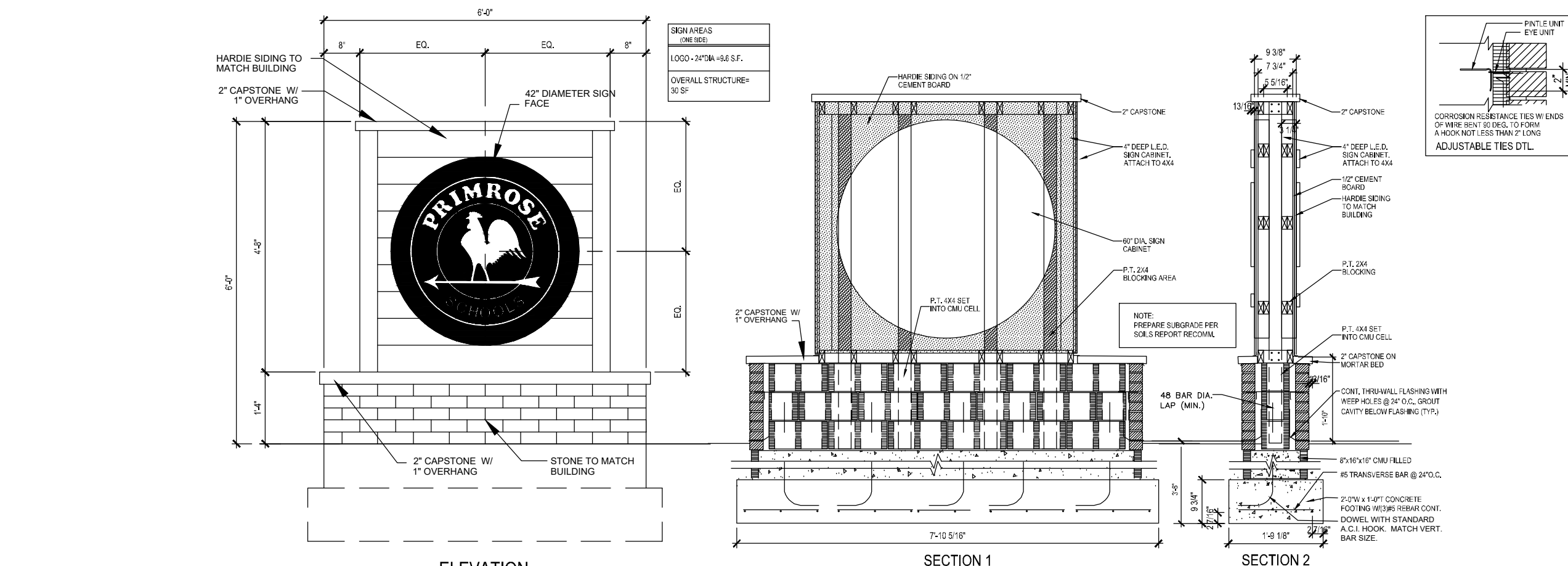
NOTE:

- MINIMUM PIPE COVER SHALL BE AS FOLLOWS:
- ELECTRIC SERVICE - PER APPLICABLE UTILITY AUTHORITY
  - GAS SERVICE - PER APPLICABLE UTILITY AUTHORITY
  - SEWER SERVICE - 36" MINIMUM
  - WATER SERVICE - 48" MINIMUM



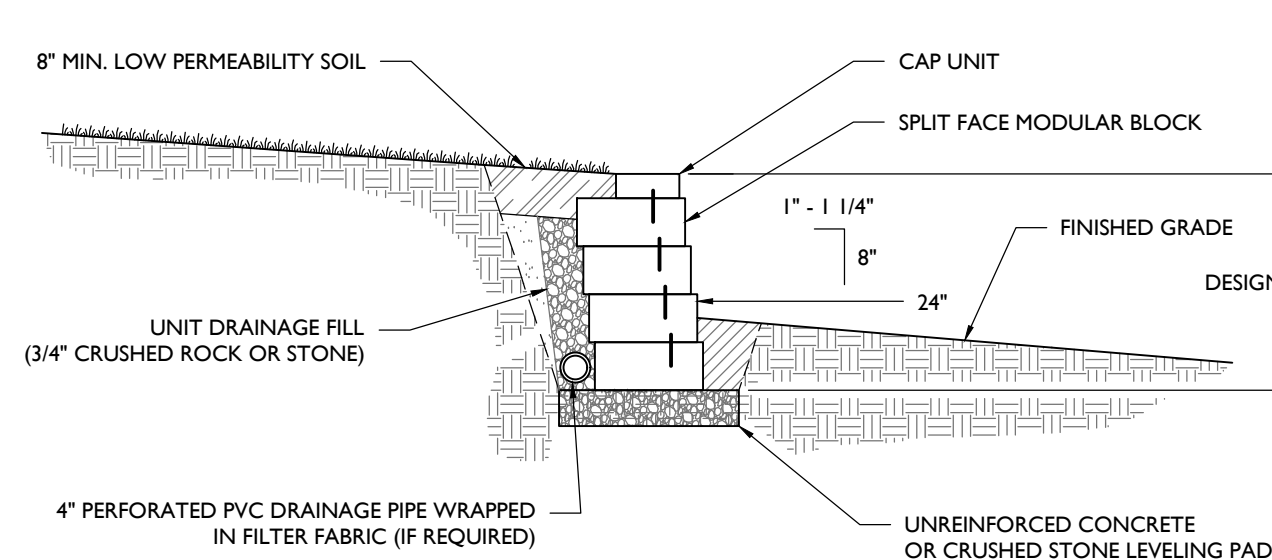
**CLEAN-OUT DETAIL**

NOT TO SCALE



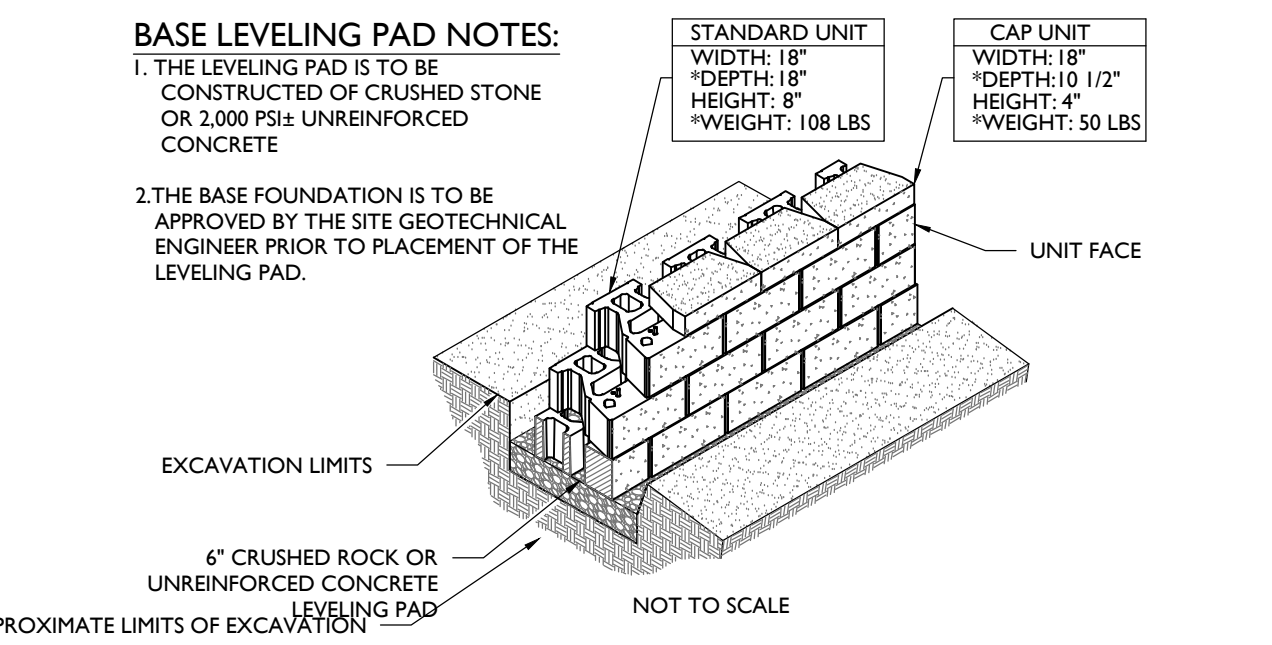
**MONUMENT SIGN DETAIL**

NOT TO SCALE



**TYPICAL GRAVITY WALL SECTION**

STANDARD UNIT - 1\"/>



**BLOCK WALL DETAIL**

NOT TO SCALE

- NOTES:
1. RETAINING WALL DESIGN PLANS TO BE PREPARED BY LICENSED PROFESSIONAL IN THE STATE OF NEW JERSEY.
  2. KEYSTONE WALL SYSTEM, OR APPROVED EQUIVALENT, TO BE CONSTRUCTED.

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FAX: (614) 850-2553  
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SELECT DESIRED WALL (1-INCH PVC PLANK):

- VERTICAL
- HORIZONTAL
- DIAGONAL

SELECT DESIRED WALL (METAL):

- 7.2 RIB
- TEXTURED FLAT
- SLAT WALL
- PERFORATED 7.2 RIB
- TRUE LOUVER

SELECT DESIRED WALL (NATURESCREEN®):

- NATURESCREEN® DMT
- NATURESCREEN® GMT
- NATURESCREEN® SMT
- NATURESCREEN® SMT E

SELECT DESIRED WALL (ACRYLICAP® ABS):

- CLAPBOARD
- HORIZONTAL LOUVER
- CLAPBOARD WITH BRICK
- 7.2 RIB
- GRAPHIC OPTION

SELECT DESIRED WALL (NATURAL WOOD & STONE):

- IPE
- CEDAR
- VERSETTA STONE (LEDGESTONE)
- VERSETTA STONE (TIGHT CUT)

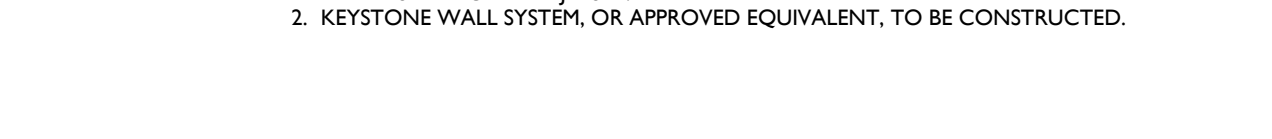
TOP VIEW

DETAIL A FOUNDATION (TYP. 6 PLACES)

DETAIL B FOUNDATION (TYP. 9 PLACES)

DETAIL C BOLT PATTERN (TYP. 6 PLACES)

REVISION DATE 19/05/2023  
CADetails.com



**DUMPSTER ENCLOSURE DETAIL**

NOT TO SCALE

ISSUE	DATE	BY	DESCRIPTION
01	05/06/2023	SCL	ISSUED FOR TOWN COMMENTS
00	03/07/2023	AJD	ISSUED FOR MUNICIPAL SUBMISSION

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LAND DEVELOPMENT PLANS

**PRIMROSE SCHOOLS**  
**FRANCHISING COMPANY**

PROPOSED CHILD DAY CARE FACILITY

PARCEL ID: 28-113  
885 MAIN STREET  
TOWN OF READING  
MIDDLESEX COUNTY, MASSACHUSETTS

JOSHUA H. KLINE, P.E.  
MASSACHUSETTS LICENSE NO. 53936  
LICENSED PROFESSIONAL ENGINEER

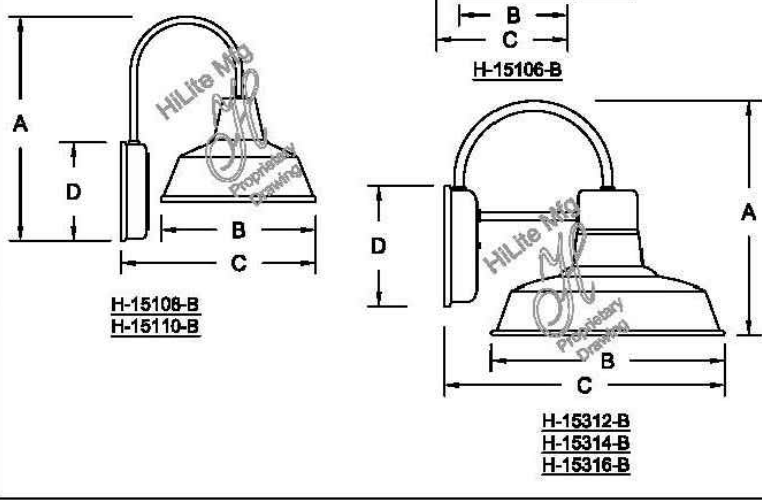
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SCALE: AS NOTED PROJECT ID: BOS-240115

TITLE:  
**CONSTRUCTION**  
**DETAILS**

DRAWING:  
**C-15**

**Warehouse Shade Collection**



**For Wall Mount Only**

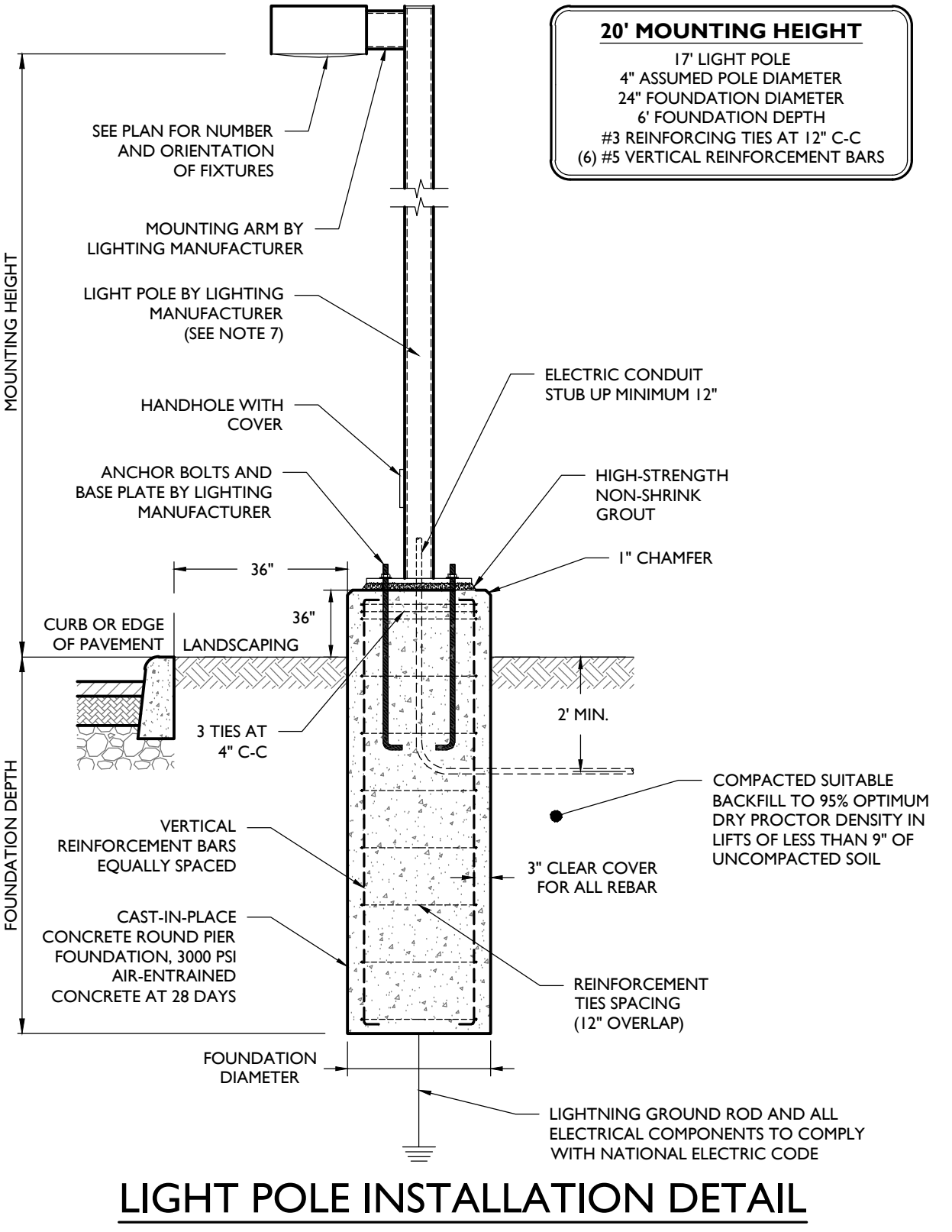
Item Number	Height (A)	Width (B)	Projection (C)	Canopy Dia. (D)
H-15106-B	8"	8"	10"	8 1/4"
H-15110-B	12"	8"	10"	8 1/4"
H-15112-B	13"	10"	12"	8 1/4"
H-15114-B	15"	10"	12"	8 1/4"
H-15116-B	18"	10"	12"	8 1/4"

Fixture No.	Fixture Color	Optional Accessories	Accessory Color	Wattage/Lamp Options	Ballast Options	Voltage
H-15106-B(1)	Standard (1)	CGU (Cast glass lens)	Standard (1)	Fluorescent (F) or LED (L)	Ballast (B) not available for INC (Do not specify)	120V (120/277V)
H-15110-B(1)	(1) (Black)	CGU (Cast glass lens)	Standard (1)	Fluorescent (F) or LED (L)	Ballast (B) not available for INC (Do not specify)	120V (120/277V)
H-15112-B	(1) (Black)	CGU (Cast glass lens)	Standard (1)	Fluorescent (F) or LED (L)	Ballast (B) not available for INC (Do not specify)	120V (120/277V)
H-15114-B	(1) (Black)	CGU (Cast glass lens)	Standard (1)	Fluorescent (F) or LED (L)	Ballast (B) not available for INC (Do not specify)	120V (120/277V)
H-15116-B	(1) (Black)	CGU (Cast glass lens)	Standard (1)	Fluorescent (F) or LED (L)	Ballast (B) not available for INC (Do not specify)	120V (120/277V)

**ORDER EXAMPLE**  
(USE THIS FORMAT TO PLACE ORDER)

H-15112-B - 91 - WGR - 91 - 13CFL - BCM - M

**Notes:**  
(1) H-15106-B available for 75W Max INC only and not available with glass enclosure.  
(2) H-15106-B and H-15110-B available for 100W Max INC only and not available with glass enclosure.  
(3) For interior finish of fixture refer to color chart on page 344-345.  
(4) Requires Globe Option (See pages 336-341 for Globe Options) CGU and WGU Max. Wattage 100W INC, 100W HID and 57W CFL.  
(5) LNUCL, LCUCL, ARN and LARN Max Wattage 200W INC, 170W HID and 57W CFL.  
(6) (RIB) Remote ballast not available for Fluorescent Lamping.  
(7) Socket Base: INC and HID are medium base, CFL are GX24Q. Suitable for wet location.



**NOTES:**  
1. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.  
2. CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.  
3. ALL REBAR TO BE NEW GRADE 60 STEEL.  
4. PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.  
5. CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 90% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.  
6. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).  
7. POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANSI/ASCE 7-93.  
8. POUR TO BE TERMINATED AT A FORM.  
9. WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.  
10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

**Mirada Medium (MRM) Outdoor LED Area Light**  
IP66 IK08

Catalog #: \_\_\_\_\_ Date: \_\_\_\_\_ Project: \_\_\_\_\_  
Prepared By: \_\_\_\_\_ Type: \_\_\_\_\_

**OVERVIEW**

Lumen Package	7000 - 48,000
Wattage Range	48 - 401
Efficacy Range (LPW)	107 - 160
Weight (lb/box)	30 (15.6)

**QUICK LINKS**  
Ordering Guide Performance Photometrics Dimensions

**FEATURES & SPECIFICATIONS**

**Construction**  
• Rugged die-cast aluminum housing contains factory pre-wired driver and optical unit. Cast aluminum wiring access door located underneath.  
• Designed to mount to square or round poles.  
• Fixtures are finished with LSI's Duragrip polyester powder coat finishing process. The Duragrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.  
• Shipping weight: 37 lbs in carton.

**Electrical**  
• High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.  
• 0-10V dimming (10% - 100%) standard.  
• Standard Universal Voltage (120-277 Vac) input 50/60 Hz or optional High-Voltage (347-480 Vac).  
• L80 Calculated Life >100K Hours (See Lumen Maintenance on Page 5).  
• Total harmonic distortion <20%.  
• Operating temperature: -40°C to +60°C (-40°F to +122°F). 42L and 48L lumen packages rated to +40°C.  
• Power factor > 90.  
• Input power stays constant over life.  
• Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C82.41.2).  
• High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation.  
• Components are fully enclosed in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.  
• Optional integral passive infrared Bluetooth™ motion and photocell sensor (See page 9 for more detail).  
• Fixtures operate independently and can be commissioned via iOS or Android configuration app.  
• LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (See page 9 for more details).

**Installation**  
• Designed to mount to square or round poles.  
• A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.  
• Included terminal block accepts up to 12 ga wire.  
• Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products. (See drawing on page 9).  
• LSI LED Fixtures carry a 5-year warranty.

**Warranty**  
• LSI LED Fixtures carry a 5-year warranty.

**Listings**  
• Listed to UL 1598 and UL 8750.  
• Meets Buy American Act requirements.  
• IDA compliant, with 3000K color temperature selection.  
• Title 24 Compliant; see local ordinance for qualification information.  
• Suitable for wet locations.  
• IP66 rated luminaire per IEC 60598.  
• 3G rated for ANSI C136.31 high vibration applications are qualified.  
• Designlights Consortium (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/DLC to confirm which versions are qualified.  
• Patented Silicone Optics (US Patent No. 10,816,165 B2).  
• IK08 rated luminaire per IEC 60626 mechanical impact code.  
• Specifications and dimensions subject to change without notice.

**Controls**  
• Optional integral passive infrared Bluetooth™ motion and photocell sensor (See page 9 for more detail).  
• Fixtures operate independently and can be commissioned via iOS or Android configuration app.  
• LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (See page 9 for more details).

**Mirada Medium Outdoor LED Area Light**

**ORDERING GUIDE**

Typical Order Example: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSC04 BRZ IL**

Luminaire Profile	Light Source	Lumen Package	Light Output	Distribution	Orientation	Voltage	Driver
MRM-Mirada	LED	36L	7000 lum	SIL-Silicone	2-Type 2 (Blank) standard L-Optic rotated left 90° R-Optic rotated right 90°	UNV - Universal Voltage (120/277V) HV - High Voltage (347-480V)	DM - 0-10V (Dimming 0-10%)

**Accessory Ordering Information**

Category	Description	Order Number
Control Accessories	FC100 Photocell for use with 0-10V option (120V)	122514
	FC100-077 Photocell for use with 0-10V option (277V)	122515
	Next-Link Photocell (4000) for use with 0-10V	122516
	Next-Link Photocell (4000) for use with 0-10V	122518
Mounting Accessories	Universal Mounting Bracket	684180CL
	Adjustable Slip-Fit (2" - 2 1/2" Range)	687180CL
	Adjustable Slip-Fit (2" - 2 1/2" Range)	687200CL
	Quick Mount Pole Bracket (Square Pole)	687200CL

**AREA LIGHT FIXTURE SPECIFICATIONS**

NOT TO SCALE

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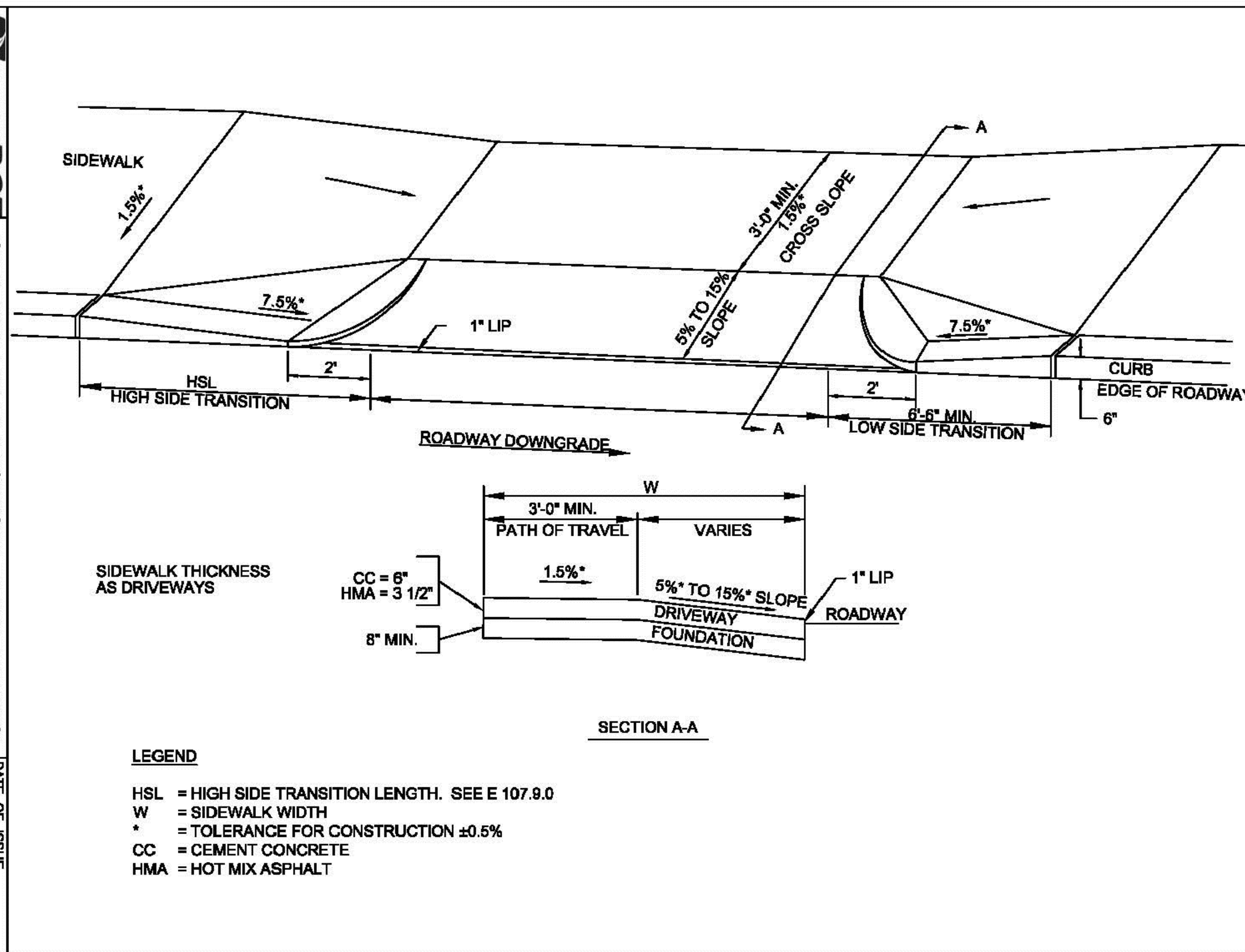
TITLE: **CONSTRUCTION DETAILS**

DRAWING: **C-16**

ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" Max

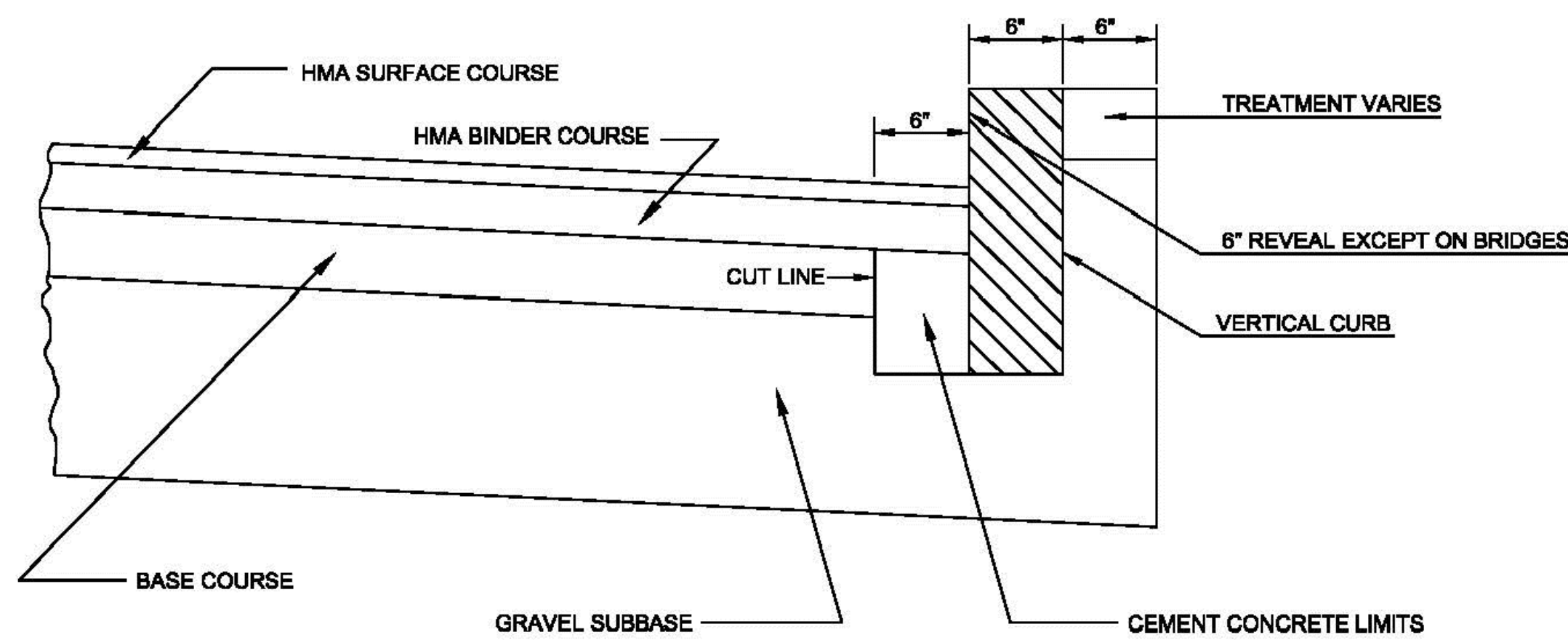
**NOTE:**

\* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".



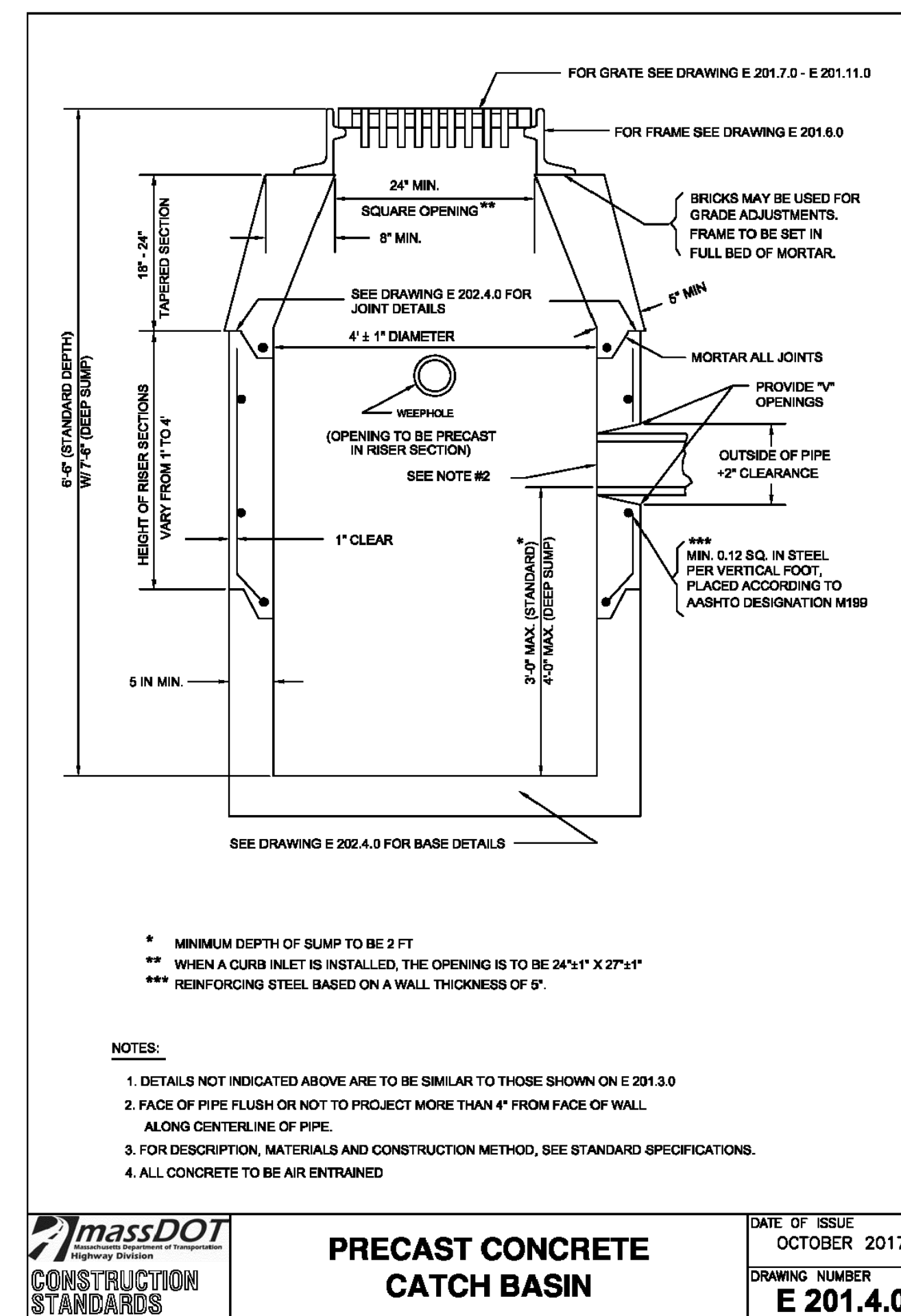
**LEGEND**

- HSL = HIGH SIDE TRANSITION LENGTH. SEE E 107.9.0
- W = SIDEWALK WIDTH
- \* = TOLERANCE FOR CONSTRUCTION ±0.5%
- CC = CEMENT CONCRETE
- HMA = HOT MIX ASPHALT



**NOTES:**

- THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT.
- CUT NEAT LINE 6" FROM CURB LINE AND REMOVE BASE AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
- ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT TO BE USED AS A SUBSTITUTE.



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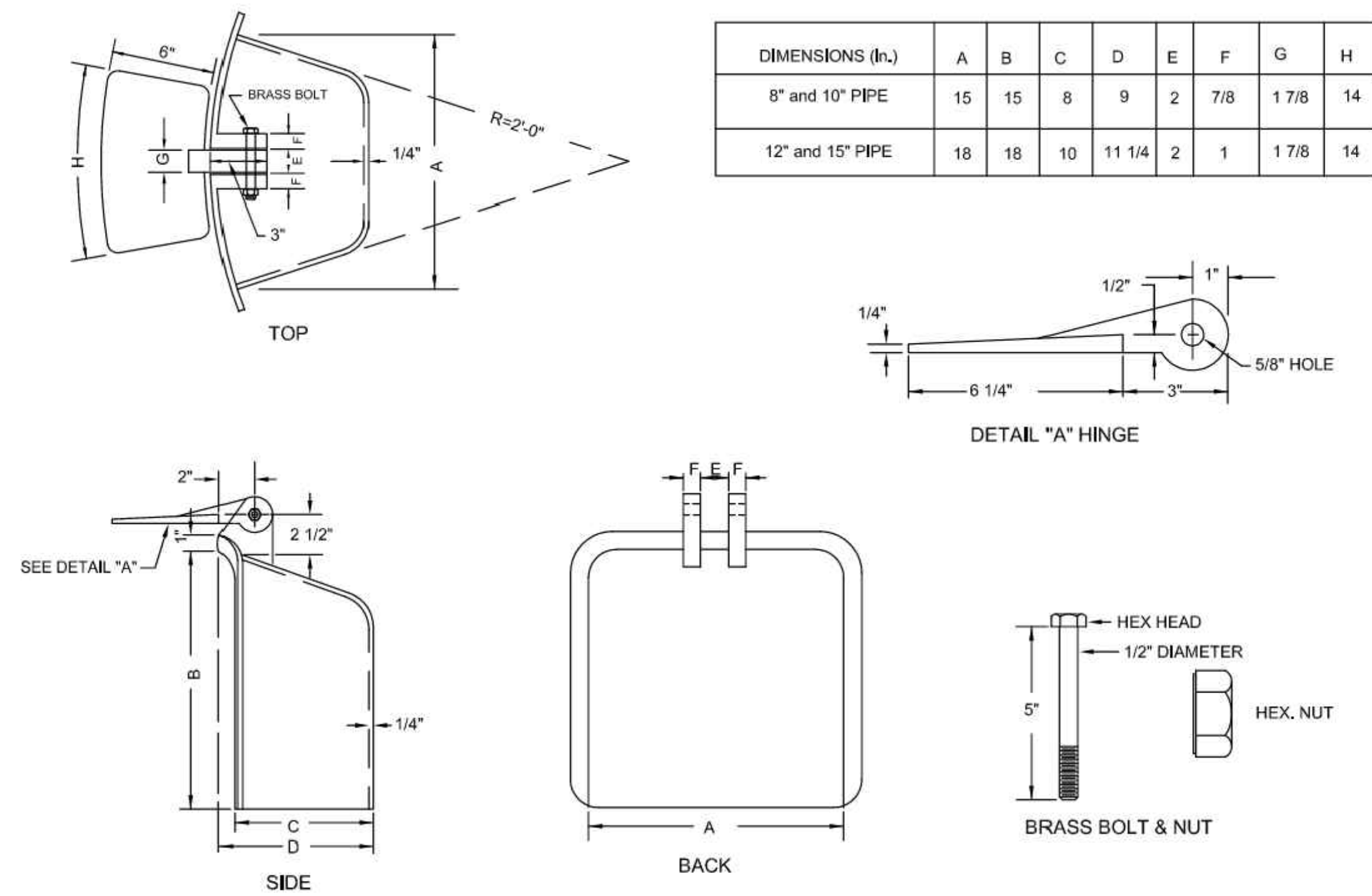
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SCALE: AS NOTED PROJECT ID: BOS-240115

TITLE:  
**CONSTRUCTION  
DETAILS**

DRAWING:  
**C-17**



NOTE:  
1. HOODS TO BE GRAY CAST IRON - SEE STANDARD SPECIFICATIONS WITH NO BLACK ASPHALT COATING ALLOWED

**NOTES:**

- ALL DIMENSIONS OF STANDARD GUARDRAIL COMPONENTS, INCLUDING PANELS, POSTS, OFFSET BLOCKS, BOLTS, NUTS, WASHERS AND HOLES, ARE BASED UPON ENGLISH UNIT CONVERSIONS OF THE AASHTO-ARTBA-AGC JOINT COMMITTEE TASK FORCE 13 REPORT: A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE (<http://www.aashtotf13.org/Barrier-Hardware.php>).
- ALL GUARDRAIL MATERIALS SHALL CONFORM TO M8.07.0 UNLESS OTHERWISE INDICATED.
- APPROVAL BY THE ENGINEER IS REQUIRED WHERE A DIFFERING GUARDRAIL CONFIGURATION IS REQUIRED FOR CONSTRUCTABILITY BEYOND THE OPTIONS SHOWN IN THESE STANDARDS OR THE PLANS.
- THE BEGIN OR END STATION LABELS SHOWN IN THESE STANDARDS CORRESPOND TO THE STATION AND OFFSET CALLOUTS SPECIFIED IN THE PLANS.
- USE 12'-6" NOMINAL LENGTH PANELS UNLESS OTHERWISE INDICATED IN THESE STANDARDS OR THE PLANS.
- ALL LAP SPLICES SHALL BE MIDSPAN UNLESS OTHERWISE SHOWN.
- LAP SPLICES SHALL BE CONSTRUCTED WITH THE SPLICE RIDGE ORIENTED DOWNSTREAM OF THE FINAL DIRECTION OF TRAFFIC IN THE NEAREST TRAVEL LANE. REORIENTING LAP SPLICES FOR TEMPORARY TRAFFIC CONTROL IS NOT REQUIRED.
- STANDARD POSTS SHALL BE STEEL OR TIMBER, UNLESS OTHERWISE INDICATED IN THE PLANS, FABRICATED TO THE DIMENSIONS SHOWN ON 400.1.4. POSTS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
- DEEP POST SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
- OFFSET BLOCKS, WHERE REQUIRED, SHALL BE TIMBER AND FABRICATED TO THE NOMINAL DIMENSIONS SHOWN ON 400.1.4. PLASTIC OR COMPOSITE OFFSET BLOCKS OF THE SAME NOMINAL DIMENSIONS THAT ARE LISTED ON THE QUALIFIED CONSTRUCTION MATERIALS LIST MAY BE SUBSTITUTED. OFFSET BLOCKS OF A SINGLE MATERIAL TYPE SHALL BE USED THROUGHOUT AN ENTIRE RUN OF GUARDRAIL; EXCEPTIONS ARE ALLOWED ONLY WHEN SPECIFIC MATERIAL TYPES ARE REQUIRED FOR TRANSITIONS, END TREATMENTS, AND/OR ANCHORAGES.
- PAVEMENT MILLING MULCH, WHERE CALLED FOR IN THE STANDARDS, SHALL CONFORM TO SECTION 739.
- GUARDRAIL DELINEATORS, CONFORMING TO SECTION 601, SHALL BE INSTALLED AT 25' INTERVALS WITHIN 100' OF AN END TREATMENT OR TRAILING ANCHORAGE AND AT 100' INTERVALS IN ALL OTHER AREAS UNLESS OTHERWISE SHOWN IN THE PLANS.
- MINIMUM OFFSET DISTANCE FROM FACE OF W-BEAM PANEL TO A FIXED (NON-BREAKAWAY) OBJECT SHALL BE 48" FOR TL-2 AND 60" FOR TL-3.



CONSTRUCTION STANDARDS  
SECTION 400

**GENERAL NOTES**

DATE OF ISSUE  
OCTOBER 2017  
DRAWING NUMBER  
**400.1.0**

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TITLE:  
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DRAWING:  
**C-18**