PERMITTING PLANS

FOR

GLADSTONE ELEMENTARY SCHOOL

50 GLADSTONE STREET

A.P. 7-4 LOT 2357

IN

CRANSTON, RHODE ISLAND

OWNER/APPLICANT:

CRANSTON PUBLIC SCHOOL DISTRICT

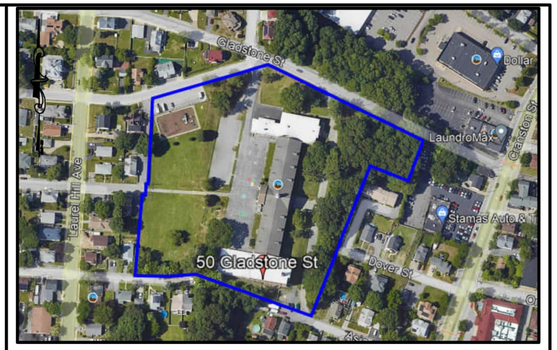
845 PARK AVENUE
CRANSTON, RI 02910

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.

400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
TELEPHONE: (401) 273-6600

DATE: MAY 2023

TIMOTHY J. BEHAN
No. 6278
REGISTERED PROFESSIONAL ENGINEER



LOCUS/LOCATION MAP
SCALE: NTS

SHEET INDEX

PARCEL/ZONING DATA

PARCEL: A.P. 7-4 LOT 2357
340,460 SF/7.82± AC

ZONING REFERENCE: B1

MINIMUM LOT AREA:	6,000 SF
MINIMUM LOT WIDTH & FRONTAGE:	60'
MINIMUM SETBACKS:	FRONT YARD – 25' REAR YARD – 20' SIDE YARD – 8'

MAXIMUM LOT COVERAGE: 35.0%
MAXIMUM BUILDING HEIGHT: 35'

LOCAL/STATE/FEDERAL PERMITS REQUIRED:

1. RIDEM RIPDES PROGRAM APPROVAL
2. CITY OF CRANSTON DEVELOPMENT PLAN REVIEW APPROVAL
3. PWSB WATER SERVICE MODIFICATION APPROVAL
4. VEOLIA WATER SANITARY SEWER SERVICE MODIFICATION APPROVAL
5. RI ENERGY GAS SERVICE MODIFICATION
6. RI ENERGY ELECTRIC SERVICE MODIFICATION
7. CITY OF CRANSTON DEPARTMENT OF PUBLIC WORKS (DPW) ROAD CUT APPROVAL

GENERAL NOTES:

1. THESE PLANS ARE ISSUED FOR PERMITTING REVIEW AND APPROVAL ONLY, AND ARE NOT ISSUED FOR CONSTRUCTION. PLANS MAY BE SUBJECT TO REVISIONS AND CONDITIONS OF LOCAL/STATE APPROVALS.
2. THE LOCATION AND ELEVATION FOR ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE, AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITY SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO COMMONWEALTH ENGINEERS & CONSULTANTS, INC. 400 SMITH STREET, PROVIDENCE, RHODE ISLAND 02908; (401) 273-6600.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-800-344-7233) A MINIMUM OF 72 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
5. UNLESS OTHERWISE NOTED OR AUTHORIZED, RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) APPROVED MATERIALS SHALL BE USED; REFER TO RIDOT'S APPROVED MATERIAL LIST.
6. CONSTRUCT ALL WORK IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF RIDOT, THE CITY OF CRANSTON, THE PROVIDENCE WATER SUPPLY BOARD, VEOLIA WATER, RI ENERGY, AND APPLICABLE MANUFACTURER'S RECOMMENDATIONS.

PROJECT NO. 21052.00

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
ABUTTER LINE		
ZONING SETBACK LINE		
SOIL EVALUATION	SE-##	
BORING	BOR-##	
SAWCUT LIMIT		
LIMIT OF DISTURBANCE		LOD LOD
EDGE OF PAVEMENT		
BACK OF BERM		
BUILDING		
FENCELINE		
STONE WALL		
RETAINING WALL		
CONTOUR LINE	##	##
SPOT GRADE	x##.#	x##.#
UTILITY POLE		
WATER MAIN	W	W
WATER GATE VALVE		
WATER CURB STOP		
HYDRANT		
SEWER MAIN	S	S
SEWER MANHOLE		
DRAIN PIPE (≤18"ø)	D	D
DRAIN PIPE (>18"ø)		
DRAIN MANHOLE		
DRAIN INLET (CATCH BASIN)		
GAS MAIN	G	G
GAS GATE VALVE		

ABBREVIATIONS

APPROX	APPROXIMATE
BIT	BITUMINOUS
BOT	BOTTOM
BOW	BOTTOM OF WALL REVEAL FINISH GRADE (ACTUAL BASE OF WALL WILL BE LOWER THAN SURFACE ELEVATION)
CB	CATCH BASIN
CEM	CEMENT
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CL##	PRESSURE RATING CLASS
CLDI	CEMENT-LINED DUCTILE IRON
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DG	DOUBLE-GRATE
DMH	DRAIN MANHOLE
DVWY	DRIVEWAY
ELEV	ELEVATION
EX	EXISTING
ESHGWT	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
GWT	GROUNDWATER TABLE
HDPE	HIGH-DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH
LOD	LIMIT OF DISTURBANCE
LT	LEFT
MAX	MAXIMUM
MCU	MODULAR CONCRETE UNIT
MIN	MINIMUM
PROP	PROPOSED
PVC	POLY-VINYL CHLORIDE
PSI	POUNDS PER SQUARE INCH (PRESSURE RATING)
PC	POINT OF CURVATURE
PT	POINT/POINT OF TANGENCY
PVI	POINT OF VERTICAL INFLECTION
R&D	REMOVE & DISPOSE
R&R	REMOVE & RESET
R&S	REMOVE & STOCKPILE/SALVAGE
RCP	REINFORCED CONCRETE PIPE
RT	RIGHT
SCH	SCHEDULE (PIPES)
SDR	STANDARD DIMENSION RATIO (PIPES)
SDWK	SIDEWALK
SESC	SOIL EROSION & SEDIMENTATION CONTROL
SEV	SOIL EVALUATION
SF	SQUARE FEET
SG	SINGLE-GRATE
SMH	SEWER MANHOLE
SS	STAINLESS STEEL
STA	STATION
SY	SQUARE YARD
TH	TEST HOLE
TOW	TOP OF WALL
VERT	VERTICAL
W	WIDTH
WF	WETLAND FLAG
WLKWY	WALKWAY
WQ	WATER QUALITY
YR	YEAR
'	FEET
"	INCHES
'/'	VERTICAL FEET/HORIZONTAL FOOT

GENERAL NOTES:

1. THESE PLANS HAVE BEEN ISSUED FOR LOCAL AND/OR STATE AGENCY REVIEW. ONLY PLANS STAMPED 'ISSUED FOR CONSTRUCTION' AFTER RECEIPT OF ALL LOCAL AND STATE APPROVALS SHALL BE USED FOR CONSTRUCTION.
2. SPECIFICATIONS & DETAILS GOVERNING THIS PROJECT ARE THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, DECEMBER 2022 EDITION & CITY OF CRANSTON SUBDIVISION & LAND DEVELOPMENT STANDARDS. THE CITY'S STANDARDS SHALL OVERRIDE RIDOT STANDARDS OUTSIDE OF STATE R.O.W.'S.
3. THE CONTRACTOR SHALL READ AND FAMILIARIZE ITSELF WITH THE CITY'S SUBDIVISION & LAND DEVELOPMENT REGULATIONS (AS THEY PERTAIN TO CONSTRUCTION) PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED SITE IMPROVEMENTS AND DRAINAGE SYSTEM IN ACCORDANCE WITH THE CITY'S SPECIFICATIONS FOR CONSTRUCTION OF REQUIRED IMPROVEMENTS, AS SPECIFIED IN THE CITY'S SUBDIVISION & LAND DEVELOPMENT REGULATIONS.
5. ANY REQUIRED AUTHORIZATION/PERMITS TO PERFORM WORK NOT PREVIOUSLY SECURED & PROVIDED BY THE OWNER SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION; THE CONTRACTOR SHALL ADHERE TO THE TERMS, CONDITIONS AND REQUIREMENTS OF ALL STATE & LOCAL PERMITS ISSUED FOR THE PROJECT.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY CONSTRUCTION OPERATIONS, INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL ASPECTS OF ON-SITE SAFETY, INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
7. ALL ELEVATIONS ON SUBJECT PROPERTY ARE BASED ON NAVD88 DATUM, AND HAVE A POTENTIAL VERTICAL VARIANCE OF ± FEET.
8. NO EXISTING DRAINAGE STRUCTURE OR FACILITY SHALL BE ALTERED OR DISTURBED UNLESS SPECIFICALLY INDICATED ON THESE DRAWINGS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
9. ALL DISTURBED AREAS/STRUCTURES SHALL BE REPLACED IN-KIND, UNLESS OTHERWISE SHOWN OR AUTHORIZED BY THE OWNER AND/OR CITY.
10. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS, AND SHALL INSPECT THE SITE. ANY CHANGES TO THE PROJECT, OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED, SHALL BE REVIEWED BY, AND MUST BE ACCEPTABLE TO, THE ENGINEER.
11. THE ABSENCE OF PARTICULAR DETAILS OR SPECIFICATIONS FOR WORK CALLED FOR ON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE PROPOSED WORK.
12. ALL CONSTRUCTION IS SUBJECT TO THE INSPECTION OF AND APPROVAL BY THE OWNER AND/OR CITY. PROPER NOTIFICATION SHALL BE GIVEN PRIOR TO THE COMMENCEMENT OF ANY WORK, AND CONSTRUCTION SHALL PROCEED WITHOUT THE AUTHORIZATION OF THE CITY.
13. PRIOR TO THE START OF CONSTRUCTION, THE APPROVED LIMIT OF DISTURBANCE SHALL BE LOCATED AND FIELD-DELINEATED BY A RI PLS; NO CLEARING OR DISTURBANCE SHALL TAKE PLACE OUTSIDE THE ESTABLISHED LIMIT AT ANY POINT DURING CONSTRUCTION, UNLESS EXPLICITLY AUTHORIZED BY THE CITY.
14. PRIOR TO THE START OF EARTH-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL SEDIMENT & SOIL EROSION CONTROL (SESC) DEVICES IN ACCORDANCE WITH RIDEM & CITY STANDARDS.
15. COMMUNICATION LINES (ELECTRIC, TELEPHONE, AND CABLE TV) SHALL BE INSTALLED UNDERGROUND, UNLESS OVERHEAD SERVICE IS APPROVED BY THE CITY.
16. ALL ROOT SYSTEMS, TREES, STUMPS, BUSHES, BOULDERS AND OTHER UNSUITABLE MATERIAL SHALL BE REMOVED AND TRANSPORTED AWAY FROM THE PROJECT SITE, UNLESS ON-SITE DISPOSAL AT AN APPROPRIATE LOCATION (OR LOCATIONS) IS APPROVED BY THE OWNER.
17. MANHOLE AND CATCH BASIN FRAME & COVERS SHALL BE ADJUSTED TO FINISH GRADE WITH RED BRICK AND MORTAR. OTHER TYPES OF BRICK AND/OR PRECAST CONCRETE RINGS ARE NOT ACCEPTABLE. GRATES SHALL BE SET 0.1 FEET BELOW ROAD GRADE. MANHOLES SHALL BE CONSTRUCTED SO AT LEAST ONE COURSE OF BRICKS IS BENEATH THE FRAME.
18. ALL MANHOLE AND CATCH BASIN FRAME & COVERS SHALL BE ADJUSTED TO THE FIRST COURSE OF PAVEMENT. THE FRAME AND COVERS SHALL BE RE-ADJUSTED IMMEDIATELY PRIOR TO PLACEMENT OF THE SECOND COURSE OF PAVEMENT.
19. ALL HDPE PIPE SHALL BE ADS N-12 INTEGRAL BELL WATER-TIGHT PIPE OR APPROVED EQUAL.

EXISTING CONDITIONS/UTILITIES NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH 'DIG SAFE'. NO DRAINAGE STRUCTURE OR FACILITY SHALL BE DISTURBED WITHOUT PROPER PERMITS UNLESS SPECIFICALLY INDICATED ON THESE DRAWINGS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. ALL EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION AND REPRESENT APPROXIMATE LOCATIONS. SOME OBSTRUCTIONS, OBSTACLES, OR DIFFICULTIES IN THE PATH OF THE WORK, EITHER ANTICIPATED OR DISCOVERED IN THE PERFORMANCE OF THE WORK, MAY NOT HAVE BEEN INDICATED BY DRAWINGS. THE CONTRACTOR SHALL BE UNDERSTOOD TO HAVE ENTERED INTO THE CONTRACT WITH FULL KNOWLEDGE THAT IN ANY WORK INVOLVING EXCAVATION OPERATIONS IN PUBLIC HIGHWAYS OR ADJACENT TO OTHER DEVELOPMENTS, SOME UNFORESEEN OBSTACLES, DIFFICULTIES, SOIL OR GROUND WATER CONDITIONS, ETC., MAY BE ENCOUNTERED, AND THAT THE CONTRACTOR HAS INCLUDED IN HIS BID AND CONTRACT OBLIGATIONS THE ASSUMPTIONS OF THE RISKS AND COSTS TO WHICH SUCH OBSTACLES, ETC. MAY SUBJECT HIM/HER.
3. THE LOCATION OF EXISTING UNDERGROUND PIPES, CONDUITS, AND STRUCTURES AS SHOWN HAS BEEN COLLECTED FROM THE BEST AVAILABLE SOURCES, AND THE OWNER, TOGETHER WITH HIS AGENTS, DOES NOT IMPLY OR GUARANTEE THE DATA AND INFORMATION IN CONNECTION WITH UNDERGROUND PIPES, CONDUITS, STRUCTURES, AND SUCH OTHER PARTS, AS TO THEIR COMPLETENESS, NOR THEIR LOCATIONS AS INDICATED. THE CONTRACTOR SHALL ASSUME THAT THERE ARE EXISTING WATER, GAS AND OTHER UTILITY CONNECTIONS IN ROUTE, WHETHER THEY APPEAR ON THE DRAWINGS OR NOT. ANY EXPENSE AND/OR DELAY OCCASIONED BY UTILITIES AND STRUCTURES OR DAMAGE THERETO, INCLUDING THOSE NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO THE OWNER.
4. BEFORE PROCEEDING WITH CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL MAKE SUCH SUPPLEMENTAL INVESTIGATIONS, INCLUDING EXPLORATORY EXCAVATIONS BY HAND DIGGING, AS DEEMED NECESSARY TO UNCOVER AND DETERMINE THE EXACT LOCATIONS OF UTILITIES AND STRUCTURES AND SHALL HAVE NO CLAIMS FOR DAMAGES DUE TO ENCOUNTERING SUBSURFACE STRUCTURES OR UTILITIES IN LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS, OR WHICH ARE MADE KNOWN TO THE CONTRACTOR PRIOR TO CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ALL DAMAGES TO EXISTING UTILITIES AND STRUCTURES.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A RI PROFESSIONAL LAND SURVEYOR TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING AND PROPOSED UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW.
6. ANY DAMAGE TO EXISTING PAVEMENT, BRIDGES, CONDUIT, SIDEWALK, FENCES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER/STATE/CITY.
7. WHENEVER IT MAY BE NECESSARY TO CROSS OR INTERFERE WITH EXISTING CULVERTS, DRAINS, SEWERS, WATER PIPES, FIXTURES, GUARDRAILS, FENCES, GAS PIPES, OR OTHER STRUCTURES NEEDING SPECIAL CARE, DUE NOTICE SHALL BE GIVEN TO THE OWNER. WHENEVER REQUIRED, ALL OBJECTS SHALL BE STRENGTHENED TO MEET ANY ADDITIONAL STRESS THAT THE WORK HEREIN SPECIFIED MAY IMPOSE UPON IT, AND ANY DAMAGE CAUSED SHALL BE THOROUGHLY REPAIRED. THE ENTIRE WORK SHALL BE PERFORMED AT NO EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BROKEN MAINS OR UTILITIES ENCOUNTERED DURING THE PROGRESS OF THE WORK AND SHALL REPAIR AND BE RESPONSIBLE FOR CORRECTING ALL DAMAGES TO EXISTING UTILITIES, STRUCTURES AND PERSONAL "PROPERTY" WHICH MAY HAVE BEEN CAUSED BY BROKEN LINES AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL CONTACT THE PROPER UTILITY OR AUTHORITY TO CORRECT OR MAKE ANY CHANGES DUE TO UTILITIES OR OTHER OBSTRUCTIONS DURING CONSTRUCTION, BUT THE ENTIRE RESPONSIBILITY AND EXPENSE SHALL BE WITH THE CONTRACTOR. ALL DAMAGED ITEMS OF WORK OR ITEMS REQUIRED TO BE REMOVED AND REPLACED DUE TO OBSTRUCTION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR TO THE COMPLETE SATISFACTION OF THE OWNER, AND AT NO ADDITIONAL EXPENSE TO THE OWNER.

SUBSURFACE CONDITIONS NOTES:

1. ALL SOIL AND TEST HOLE DATA, WATER TABLE ELEVATIONS, AND SOIL ANALYSIS SHOWN/REFERENCED ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS APPLY ONLY AT THE LOCATION OF THE TEST HOLES AND TO THE DEPTHS INDICATED. SOIL TEST REPORTS ARE AVAILABLE FOR INSPECTION AT THE OFFICE OF THE DESIGN ENGINEER. ANY ADDITIONAL SUBSURFACE EXPLORATION SHALL BE DONE BY THE CONTRACTOR AT THEIR OWN EXPENSE. IT IS UNDERSTOOD THAT THE MAKING OF THE DEDUCTIONS, INTERPRETATIONS AND CONCLUSIONS FROM ALL THE ACCESSIBLE FACTUAL INFORMATION, INCLUDING THE NATURE OF THE MATERIALS TO BE EXCAVATED, THE DIFFICULTIES OF MAKING AND MAINTAINING THE REQUIRED EXCAVATIONS, AND THE DIFFICULTIES OF DOING OTHER WORK AFFECTED BY THE GEOLOGY AND OTHER SUBSURFACE CONDITIONS AT THE SITE OF THE WORK, ARE THE CONTRACTOR'S SOLE RESPONSIBILITY.
2. THE INDICATED ELEVATION OF THE WATER TABLE IS THAT EXISTING AT THE DATE THE TEST HOLE DATA WAS DETERMINED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND ALLOW FOR THE ELEVATION OF GROUNDWATER AT THE DATE OF PROJECT CONSTRUCTION. A DIFFERENCE IN ELEVATION BETWEEN GROUNDWATER SHOWN IN SOIL LOGS AND GROUNDWATER ACTUALLY ENCOUNTERED DURING CONSTRUCTION WILL NOT BE CONSIDERED AS A BASIS FOR EXTRA WORK.
3. ESTIMATED SEASONAL HIGH WATER TABLES ARE FOR CONSTRUCTION OF ON-SITE STORMWATER MANAGEMENT SYSTEMS ONLY, AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. ESTIMATED SEASONAL HIGH WATER TABLES MAY BE EXCEEDED PERIODICALLY.

CONSTRUCTION NOTES:

1. OWNER SHALL RETAIN THE SERVICES OF A RHODE ISLAND PROFESSIONAL ENGINEER TO REVIEW AND APPROVE SHOP DRAWINGS, SAMPLES, AND OTHER SUBMITTALS OF THE CONTRACTOR FOR CONFORMANCE WITH THE DESIGN CONCEPT (THIS PLAN SET) AND CITY REGULATIONS, WHICH INCLUDE (BUT ARE NOT LIMITED TO) THE FOLLOWING:
   - A. DRAINAGE SYSTEM SHOP DRAWINGS/SKETCHES FOR PIPE, PIPE JOINTS, PIPE BEDDING/BACKFILL MATERIALS (SIEVE ANALYSIS, ETC.), COMPACTION METHODS, MANHOLE STRUCTURES, FRAME & COVERS, FRAME & GRATES, FRAME & COVER ADJUSTMENT METHODS TO FINISH GRADE, PROPOSED RIM ELEVATIONS, PIPE INVERTS AND PIPE DIAMETERS. ANY SUBSTANTIAL CHANGES TO THE DESIGN CONCEPT SHALL BE BROUGHT TO THE CITY'S ATTENTION.
   - B. ROADWAY CONSTRUCTION SHOP DRAWINGS/SKETCHES FOR GRAVEL BASE MATERIALS, BITUMINOUS CONCRETE COURSES, SIGNAGE/STRIPING, RETAINING WALLS AND CURBING/BERMS.
   - C. SOIL EROSION CONTROL AND DEWATERING METHODS.
   - D. COMPACTION METHODS FOR INSTALLING PIPE/MANHOLES, GRAVEL ROAD BASE AND BITUMINOUS CONCRETE COURSES.
   - E. TESTING METHODS AND TESTING FREQUENCY FOR DRAINAGE AND ROAD SYSTEMS. TESTING FREQUENCY SHALL BE IN ACCORDANCE WITH RIDOT AND TYPICAL ENGINEERING STANDARDS.
2. THE SHOP DRAWING SUBMITTAL PACKAGE SHALL BE STAMPED BY A RHODE ISLAND PROFESSIONAL ENGINEER AND SUBMITTED TO THE CITY/CITY ENGINEER FOR REVIEW AND APPROVAL. SHOP DRAWING RECORDS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT, INCLUDING THE WARRANTY PERIOD.
3. MARKED-UP CONSTRUCTION DRAWINGS SHALL BE MAINTAINED AND KEPT AT THE JOB SITE FOR THE DURATION OF THE PROJECT.
4. CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT DRAWINGS IN ACCORDANCE WITH CITY REGULATIONS; AS-BUILTS SHALL BE STAMPED BY A R.I. PROFESSIONAL LAND SURVEYOR AND R.I. PROFESSIONAL ENGINEER.
5. PRIOR TO ACCEPTANCE OF INFRASTRUCTURE, A RI P.E. SHALL CERTIFY THE INFRASTRUCTURE WAS INSTALLED IN ACCORDANCE WITH THE DESIGN INTENT AND MEETS RIDOT/CITY STANDARDS & PERMIT STIPULATIONS, AND IS READY FOR USE.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC DURING CONSTRUCTION, INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE MAY 2012 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), INCLUDING ALL SUBSEQUENT REVISIONS.
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE STREET RIGHT-OF-WAYS UNLESS EXPLICITLY AUTHORIZED BY THE OWNER.
4. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH R.I.D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

EARTHWORK NOTES:

1. SPECIFICATIONS & DETAILS TO GOVERN THIS PROJECT ARE THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION – DECEMBER 2022 EDITION (INCLUDING ALL SUBSEQUENT ADDENDA) AS WELL AS CITY STANDARDS; WHERE APPLICABLE, THE CITY'S STANDARDS SHALL OVERRIDE RIDOT STANDARDS.
2. RIDOT STANDARDS ARE AVAILABLE FOR DOWNLOAD FROM THE RIDOT WEBSITE UNDER 'STANDARDS AND SPECIFICATIONS' (WWW.DOT.STATE.RI.US/ENGINEERING/STANDARDS/INDEX.ASP). CITY STANDARDS ARE AVAILABLE FOR DOWNLOAD FROM THE CITY OF CRANSTON WEBSITE.
3. EMBANKMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM 4" OF TOPSOIL AND GRASS SEED, UNLESS OTHERWISE NOTED.
4. ALL EXCAVATION AND PLACEMENT OF FILL SHALL BE IN ACCORDANCE WITH R.I.D.O.T. STANDARD SPECIFICATIONS SECTION 202 AND CITY OF CRANSTON SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. ALL MATERIALS AND METHODS SHALL BE PERFORMED IN ACCORDANCE WITH THESE STANDARDS AND SPECIFICATIONS. ALL FILL BENEATH PAVEMENTS SHALL BE GRAVEL AS DEFINED IN THE RIDOT SPECIFICATIONS.
5. ALL AREAS COMPACTED BY CONSTRUCTION ACTIVITIES (OTHER THAN ROADWAYS AND BENEATH STRUCTURES) SHALL BE RESTORED TO PROMOTE INFILTRATION BY TILLING THE TOP 12 INCHES OF SOIL PRIOR TO FINAL STABILIZATION.
6. ALL UNSUITABLE MATERIAL (LOAM, SUBSOIL, ROOTS, TREE TRUNKS, CLAY, SILT, ORGANIC MATTER, LARGE STONES, ETC.) SHALL BE REMOVED FROM HARDSCAPE AREA (PAVEMENT, SIDEWALKS, WALKWAYS) SUB-GRADES AND EMBANKMENT AREAS PRIOR TO THE PLACEMENT OF THE GRAVEL SUBBASE/BERM MATERIAL, AS DIRECTED AND APPROVED.
7. SUITABLE SURPLUS MATERIAL GENERATED BY EXCAVATIONS WITHIN THE PROJECT AREA (SAND, GRAVEL, LOAM, ETC.) SHALL BE RE-USED, TO THE EXTENT POSSIBLE, IN OTHER LOCATIONS WITHIN THE PROJECT AREA; MINING OF SITE MATERIALS (I.E. REMOVAL OF SUITABLE IN-SITU MATERIALS FROM THE SITE AND REPLACEMENT WITH IMPORTED BORROW MATERIALS) SHALL NOT BE PERMITTED.

GROUNDWATER REMOVAL & PROTECTION FROM FLOODING NOTES:

1. SOME EXCAVATIONS FOR PIPELINES, STRUCTURES, AND APPURTENANT WORK REQUIRED MAY OCCUR BELOW EXISTING GROUNDWATER LEVELS.
2. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL PUMPS, DRAINS, WELL POINTS AND/OR ANY OTHER FACILITIES FOR THE CONTROL, COLLECTION, AND DISPOSAL OF GROUNDWATER OR SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK, AND SHALL PROVIDE ALL PUMPS, PIPING, AND DITCHING FOR THE REMOVAL OF WATER FROM THE TRENCHES AND EXCAVATIONS SO THAT ALL TRENCHES AND EXCAVATIONS MAY BE KEPT FREE FROM WATER AT ALL TIMES, AND SO THAT THE WORK MAY BE PERFORMED IN THE DRY.
3. DEWATERING OF EXCAVATIONS SHALL BE ACCOMPLISHED BY METHODS THAT HAVE BEEN APPROVED PRIOR TO COMMENCEMENT OF WORK BY THE ENGINEER, AND WHICH HAVE A BACKGROUND OF SUCCESSFUL DEWATERING OF EXCAVATIONS OF THE TYPE TO BE EMPLOYED FOR THE WORK.
4. PUMPING SHALL BE CONTINUOUS WHERE DIRECTED AND/OR AS NECESSARY TO PROTECT THE WORK, AND TO MAINTAIN SATISFACTORY PROGRESS OF SAME.
5. THE CONTRACTOR'S DEWATERING AND PUMPING OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT NO LOSS OF GROUND WILL RESULT FROM THESE OPERATIONS. ANY DAMAGE TO EXISTING FEATURES OR TO THE CONTRACT WORK RESULTING FROM THE CONTRACTOR'S DEWATERING OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR, AS DIRECTED BY THE OWNER, AT NO ADDITIONAL EXPENSE TO THE OWNER. PRECAUTIONS SHALL BE TAKEN TO PROTECT NEW AND EXISTING WORK FROM FLOODING OR DAMAGE DURING STORMS OR OTHER CAUSES.
6. ALL PIPELINES OR STRUCTURES NOT STABLE AGAINST UPLIFT DURING CONSTRUCTION OR PRIOR TO COMPLETION SHALL BE THOROUGHLY BRACED OR OTHERWISE PROTECTED.
7. WATER FROM THE TRENCHES, EXCAVATIONS, AND DRAINAGE OPERATIONS SHALL BE DISPOSED OF IN SUCH A MANNER AS WILL CAUSE NEITHER INJURY TO PUBLIC HEALTH OR PRIVATE PROPERTY, NOR DAMAGE TO THE WORK COMPLETED OR IN PROGRESS.
8. THE CONTRACTOR SHALL CONSTRUCT DITCHES, ESTABLISH GRADING, AND PERFORM ANY AND ALL OTHER WORK AS MAY BE NECESSARY TO DIVERT AND PREVENT SURFACE WATER AND WATER FROM DEWATERING OPERATIONS FROM ENTERING EXCAVATION AND WORK AREAS.

STORMWATER SYSTEM OPERATION & MAINTENANCE NOTES:

1. INSPECTIONS AND PROPER MAINTENANCE ARE ESSENTIAL FOR THE LONGEVITY OF THE DRAINAGE SYSTEMS. THE DRAINAGE SYSTEM SHALL BE INSPECTED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE (O&M) PLAN PREPARED SPECIFICALLY FOR THIS PROJECT.
2. THE CRANSTON PUBLIC SCHOOL DISTRICT (CPSD) SHALL BE RESPONSIBLE FOR ALL SITE STORMWATER STRUCTURES (CATCH BASINS, DRAIN MANHOLES, PIPING, WATER QUALITY UNITS, SEDIMENT FOREBAYS & UNDERGROUND CHAMBER SAND FILTERS).
3. PERSONNEL PERFORMING THE MAINTENANCE OF THE STORMWATER SYSTEM, WHETHER IN-HOUSE EMPLOYEES OF THE CPSD OR OUTSIDE CONTRACTORS, SHALL BE PROPERLY TRAINED AND EXPERIENCED WITH THE MAINTENANCE REQUIREMENTS DETAILED IN THE O&M PLAN FOR THIS DEVELOPMENT, AS WELL AS THE 'RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL,' LATEST EDITION (KNOWN AS THE 'MANUAL').

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
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Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Legend, Notes & Abbreviations

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C001

GENERAL NOTES:

1) THE INFORMATION SHOWN HEREON IS BASED ON AN ON-THE-GROUND SURVEY PERFORMED BETWEEN AUGUST 27 & SEPTEMBER 7, 2021 BY ALPHA SURVEY GROUP, LLC.
2) THIS PROJECT IS REFERENCED TO THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83), CORS ADJUSTMENT (NA2011/GEOID 12a) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS MADE ON AUGUST 27 UTILIZING KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
3) THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), CORS ADJUSTMENT (NA2011/GEOID 12a) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS MADE ON AUGUST 27 UTILIZING KEYSTONE PRECISION INSTRUMENTS' KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
4) THE WETLAND DEPICTED HEREON WAS FIELD DELINEATED BY AVIZINIS ENVIRONMENTAL SERVICES, INC., ON AUGUST 20, 2021.

SITE NOTES:

1. THE SUBJECT PARCEL LIES WITHIN 'ZONE X - AREAS OF MINIMAL FLOOD HAZARD' AS DELINEATED ON THE FIRM FLOOD INSURANCE RATE MAP FOR PROVIDENCE COUNTY, RHODE ISLAND (ALL JURISDICTIONS), MAP NUMBER 44007C0314H, EFFECTIVE DATE OCTOBER 2, 2015.
2. PER THE USDA WEB SOIL SURVEY, THE ENTIRE PARCEL IS UNDERLAIN BY CANTON-URBAN LAND COMPLEX SOILS (CB). THESE SOILS ARE CLASSIFIED AS BELONGING TO HSG B, ARE GENERALLY SUITABLE FOR THE TYPE OF DEVELOPMENT PROPOSED ON THE PARCEL, AND ARE NOT TYPICALLY SUBJECT TO ANY OF THE FOLLOWING CONSTRAINTS: HYDRIC SOILS, HIGH WATER TABLES, SHALLOW LEDGE/BEDROCK, OR EXCESSIVELY ERODIBLE SOILS.
3. ON-SITE SOIL EVALUATIONS DISCOVERED A PREDOMINANCE OF HUMAN TRANSPORTED MATERIAL (HTM, OR FILL) THROUGHOUT THE SITE, TO A DEPTH OF AT LEAST 8-10 FEET IN ALL EVALUATIONS.
4. NO LEDGE, GROUNDWATER OR OTHER LIMITING LAYERS WERE ENCOUNTERED IN ANY OF THE SOIL EVALUATIONS.
5. THERE IS AN ISOLATED WETLAND (720 SF) ON THE PARCEL. THE TOTAL UPLAND AREA IS 339,740 SF)
6. PER THE RIDEM ENVIRONMENTAL RESOURCE MAPS, THE PARCEL IS NOT LOCATED WITHIN ANY NATURAL HERITAGE AREAS.

UTILITY NOTES:

1) UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND WERE DETERMINED BY AN "ON-THE-GROUND" UTILITY DESIGNATION PERFORMED BY GPRS, LLC. BETWEEN JULY 28 & AUGUST 1, 2020 USING AN UNDERGROUND SCANNING GPR ANTENNAE AND AN ELECTROMAGNETIC PIPE LOCATOR. GPRS FINDINGS WERE PRESENTED IN A REPORT AND JOB SUMMARY DATED 08/03/2020.
2) ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD. BEFORE DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACK FILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC & PRIVATE, MUST BE NOTIFIED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE R.I. GENERAL LAW §39-1.2.
3) ALPHA SURVEY GROUP, LLC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE FUTURE CONNECTIONS, THE APPROPRIATE UTILITY ENGINEERING DEPARTMENTS MUST BE CONSULTED. CALL "DIG SAFE" AT 811.

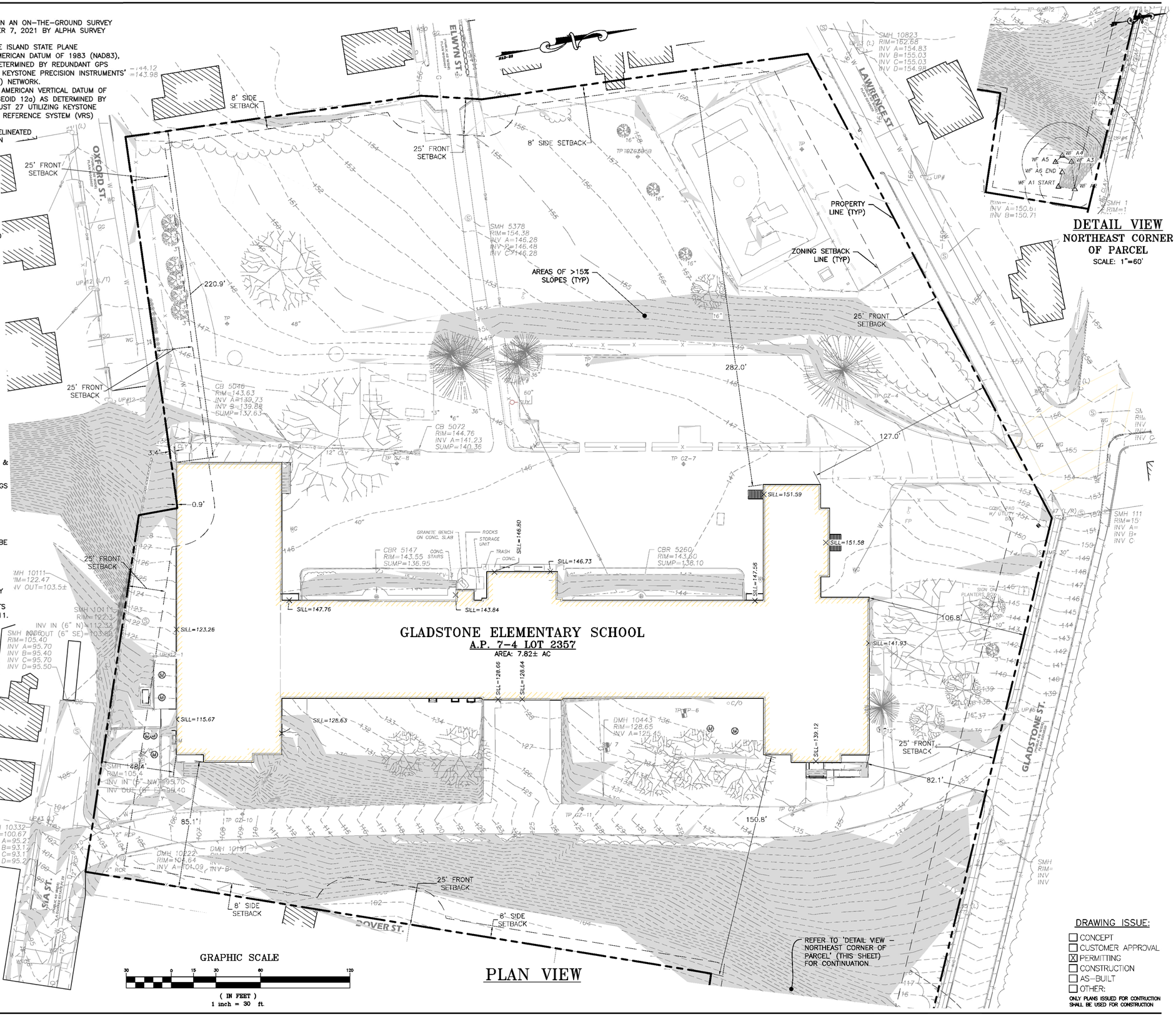
PARCEL/ZONING DATA

PARCEL: A.P. 7-4 LOT 2357
340,460 SF/7.82± AC

ZONING REFERENCE: B1

MINIMUM LOT AREA:	6,000 SF
MINIMUM LOT WIDTH & FRONTAGE:	60'
MINIMUM SETBACKS:	FRONT YARD - 25' REAR YARD - 20' SIDE YARD - 8'

MAXIMUM LOT COVERAGE: 35.0% (119,161 SF)
EXISTING LOT COVERAGE: 13.9% (47,324 SF)
MAXIMUM BUILDING HEIGHT: 35'
EXISTING BUILDING HEIGHT: 82'±



PLAN VIEW

DETAIL VIEW
NORTHEAST CORNER OF PARCEL
SCALE: 1"=60'

REFER TO 'DETAIL VIEW - NORTHEAST CORNER OF PARCEL' (THIS SHEET) FOR CONTINUATION

GLADSTONE ELEMENTARY SCHOOL
A.P. 7-4 LOT 2357
AREA: 7.82± AC

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

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CHECKED BY:	TJB

SHEET NAME:

Existing Conditions Plan

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C002

GENERAL SITE PREPARATION NOTES:

1. PRIOR TO THE START OF EARTH DISTURBING ACTIVITIES, CONTRACTOR SHALL FAMILIARIZE ITSELF WITH THE SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN PREPARED FOR THIS PROJECT, AS WELL AS ALL STATE AND LOCAL PERMITS/APPROVALS ISSUED FOR THE PROJECT.
2. REFER TO SHEET CD101 – CIVIL DETAILS 1 FOR CONSTRUCTION PERIOD SOIL EROSION/SEDIMENTATION CONTROL (SESC) MEASURE DETAILS AND NOTES.

CONSTRUCTION ACCESS NOTES:

1. ACCESS TO THE SITE MAY BE TAKEN FROM ANY PORTION OF EITHER GLADSTONE STREET OR LAWRENCE STREET, PROVIDED THAT SAID ACCESS IS WITHIN THE DESIGNATED LIMITS OF DISTURBANCE, AND THAT THE ACCESS IS PROTECTED BY A PROPERLY–CONSTRUCTED CONSTRUCTION ACCESS PAD.
2. ACCESS TO THE SITE AT LOCATIONS NOT PROTECTED BY AN ACCESS PAD SHALL NOT BE ALLOWED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, RELOCATING AND PERIODICALLY REFRESHING CONSTRUCTION ACCESS PADS OVER THE COURSE OF THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROMPTLY CLEAN ANY DEBRIS/ MATERIALS TRACKED ONTO THE LOCAL ROADWAYS.

EXISTING UTILITY NOTES:

1. EXISTING UNDERGROUND UTILITIES WITHIN THE SITE AND ROADWAY DEPICTED HEREON ARE BASED ON THE BEST AVAILABLE SURVEYED DATA AND RECORD PLAN INFORMATION. HOWEVER, THE PRECISE NATURE OF SOME DEPICTED UNDERGROUND SITE UTILITIES COULD NOT BE DETERMINED, AND ADDITIONAL UNKNOWN UNDERGROUND UTILITIES MAY BE PRESENT ON SITE.
2. THE INTENT OF THE DESIGN IS TO PROPERLY RELOCATE (FOR SERVICES TO REMAIN) OR REMOVE/ABANDON–IN–PLACE ALL EXISTING UTILITY CONNECTIONS WITHIN THE PROPOSED BUILDING ADDITION FOOTPRINTS, AND TO INSTALL NEW UTILITY SERVICE CONNECTIONS AS DEPICTED ON THE UTILITY PLAN.
3. REMOVAL/ABANDONMENT SHALL BE COORDINATED WITH, AND PERFORMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF, THE RESPECTIVE UTILITY PROVIDERS.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SECURING ANY AND ALL PERMITS NECESSARY TO ALLOW FOR THE EXISTING UTILITY REMOVAL/ABANDONMENT.
5. THE CONTRACTOR SHALL PERFORM TEST PIT EXCAVATIONS IN LOCATIONS OF DEPICTED UNIDENTIFIED UTILITY SERVICES TO DETERMINE THE NATURE OF THE SERVICE PRIOR TO THE ABANDONMENT/REMOVAL.

EXISTING FENCING NOTES:

1. ALL EXISTING CHAIN LINK FENCING ON AND AROUND THE SITE SHALL BE REMOVED AND DISPOSED UNLESS OTHERWISE INDICATED.
2. EXISTING FENCING TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION.
3. FENCING AFFECTED BY CONTRACTOR'S OPERATIONS, PARTICULARLY PERIMETER FENCING ALONG ADJACENT PRIVATE PROPERTIES, SHALL BE REPLACED IN–KIND AS NEEDED.
4. CONTRACTOR MAY INSTALL TEMPORARY CONSTRUCTION FENCING AS NEEDED OR DESIRED; SUCH TEMPORARY FENCING SHALL BE AT THE CONTRACTOR'S DISCRETION, AND IS NOT DEPICTED HEREON.

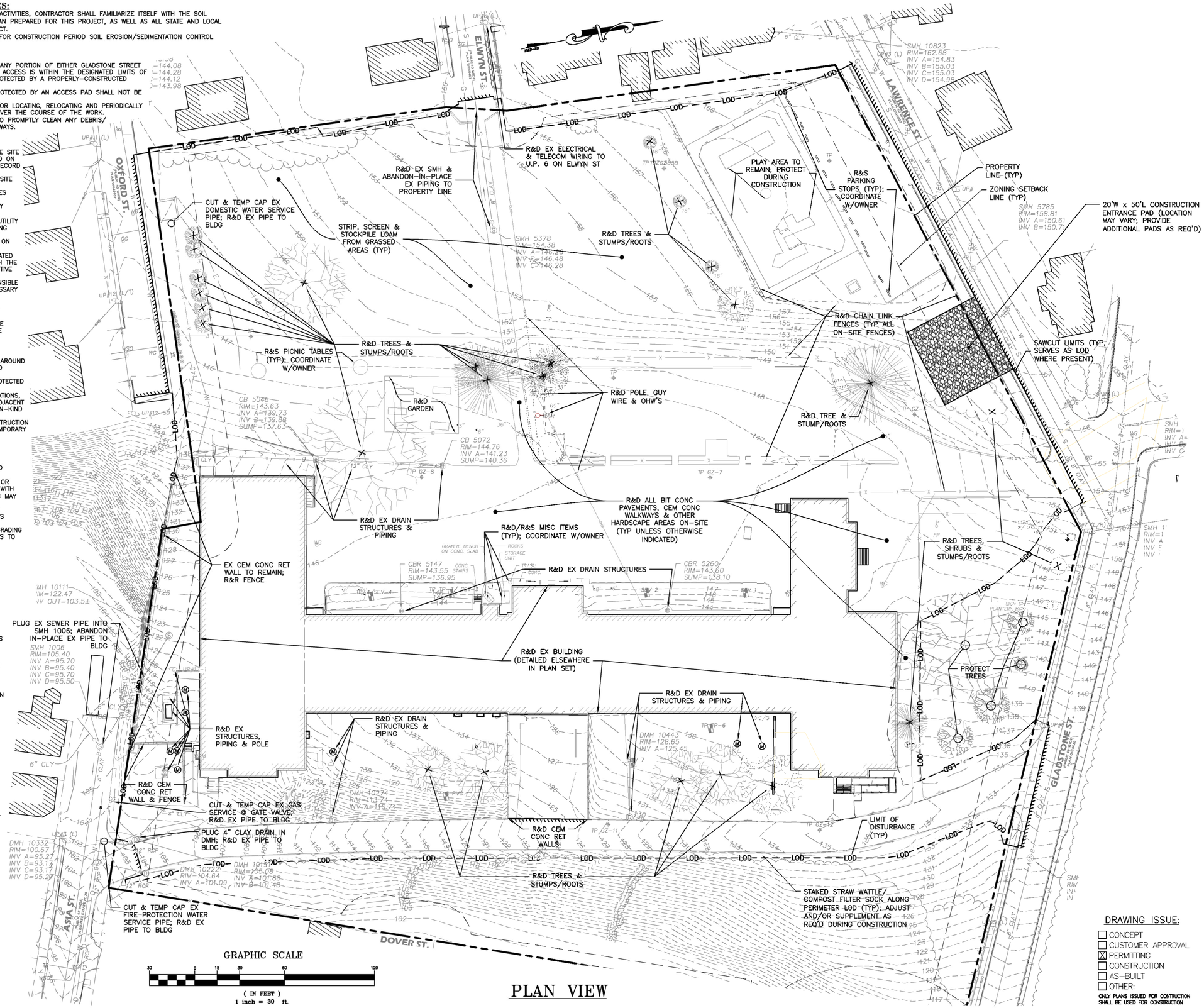
EXISTING SIGNAGE NOTES:

1. ALL EXISTING POST–MOUNTED SIGNS ON AND AROUND THE SITE SHALL BE REMOVED AND STOCKPILED ON–SITE (FOR LATER RE–USE) OR DISPOSED. CONTRACTOR SHALL COORDINATE WITH THE SCHOOL AND/OR CITY ON WHICH SIGNS MAY BE RE–USED.
2. REGARDLESS OF WHETHER A SIGN IS TO BE RE–USED OR DISPOSED, THE EXISTING POSTS SHALL ALL BE DISPOSED.
3. REFER TO SHEET C101 – SITE LAYOUT & GRADING PLAN FOR INFORMATION ON PROPOSED SIGNS TO BE INSTALLED ON AND AROUND THE SITE.

SUGGESTED SEQUENCE & STAGING OF SITE WORK:

1. NOTIFY THE CITY PRIOR TO THE START OF EARTH DISTURBING ACTIVITIES.
2. INSTALL PERIMETER SESC MEASURES. IN NO CASE SHALL THE LIMIT OF WORK EXTEND BEYOND SAID PERIMETER MEASURES.
3. SAWCUT SITE PAVEMENT/CEMENT CONCRETE.
4. INSTALL CONSTRUCTION ENTRANCE PAD(S) (SEE APPLICABLE NOTES ON THIS SHEET).
5. REMOVE/ABANDON EXISTING SITE UTILITIES AS APPLICABLE; COORDINATE WITH INDIVIDUAL UTILITY PROVIDERS (SEE APPLICABLE NOTES ON THIS SHEET).
6. ROUGH–GRADE SITE TO PROPOSED SUBBASE ELEVATIONS.
7. INSTALL GRAVEL BASE COURSE WHERE CALLED FOR; ALLOW TO WEATHER FOR MINIMUM SIXTY (60) DAYS AFTER COMPLETION OF STORMWATER & UTILITY WORK.
8. FINE–GRADE AND COMPACT GRAVEL BASE COURSE AFTER WEATHERING PERIOD AND INSTALL FOUNDATIONS/BASE COURSES FOR PROPOSED HARDSCAPE/SITE FEATURES (AS APPLICABLE).
9. INSTALL PROPOSED ROADWAY SIDEWALKS & CURBING/ADA RAMPS.
10. ADJUST ALL UTILITY CASTINGS TO FINISH GRADES.
11. INSTALL SURFACE/FINISH COURSES TO HARDSCAPE AREAS AS APPLICABLE.
12. VERIFY ADEQUATE STABILIZATION OF ALL UNPAVED AREAS, THEN REMOVE REMAINING SESC MEASURES.
13. CLEAN OUT ALL DRAINAGE STRUCTURES AS NEEDED. REMOVE AND LEGALLY DISPOSE ALL ACCUMULATED SEDIMENT/DEBRIS IN A SUITABLE OFF–SITE LOCATION.

NOTE: THE CONTRACTOR MAY MODIFY THE PRECEDING SUGGESTED SEQUENCE OF CONSTRUCTION IF NECESSARY OR PRACTICAL, SO LONG AS THE INTENT OF THE SESC PLAN IS MET AT ALL TIMES.



PLAN VIEW

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
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- ☐ OTHER:

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KEY PLAN:

SEAL:

TIMOTHY J. BEHAN — No 6278 — REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
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DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Site Preparation / Demolition Plan

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C100

ADA PARKING REQUIREMENTS/TABULATION:

PER SECTION 208.2 OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, THE REQUIRED NUMBER OF ADA PARKING SPACES IS AS FOLLOWS:

101–150 TOTAL STANDARD SPACES: 5 ADA SPACES

VAN ACCESSIBLE : 1 PER 6 ADA SPACES, MINIMUM OF 1

TOTAL ON–SITE PROPOSED SPACES: 100 (USE 101–150)

TOTAL REQUIRED ADA SPACES: 5

TOTAL PROVIDED ADA SPACES: 6

1 VAN ACCESSIBLE SPACE/6 REQUIRED ADA SPACES = 1 VAN ACCESSIBLE SPACE

PROPOSED: 2 VAN–ACCESSIBLE ADA SPACES

ON–SITE PARKING REQUIREMENTS/TABULATION:

PER SECTION 17.64.010 "OFF–STREET PARKING, ITEM I.17" OF THE CITY OF CRANSTON ZONING ORDINANCE, THE REQUIRED NUMBER OF ON–SITE PARKING SPACES IS AS FOLLOWS:

SCHOOLS: 1 SPACE/2 STAFF
(0.5 SPACES/STAFF)

PROJECTED MAXIMUM STAFFING: 113

REQUIRED ON–SITE PARKING SPACES:

0.5 SPACES/STAFF x 113 STAFF = 57 SPACES

PROVIDED ON–SITE PARKING SPACES: 100

100 SPACES/113 STAFF = 0.88 SPACES/STAFF

0.88 > 0.5 SPACES/STAFF

PARCEL/ZONING DATA

PARCEL: A.P. 7–4 LOT 2357
340,460 SF/7.82± AC

ZONING REFERENCE: B1

MINIMUM LOT AREA:	6,000 SF
MINIMUM LOT WIDTH & FRONTAGE:	60'
MINIMUM SETBACKS:	FRONT YARD – 25' REAR YARD – 20' SIDE YARD – 8'
MAXIMUM LOT COVERAGE:	35%
PROPOSED LOT COVERAGE:	10.2% (34,596 SF)
MAXIMUM BUILDING HEIGHT:	35'
PROPOSED BUILDING HEIGHT:	88'
(53' HEIGHT VARIANCE GRANTED FEB 8, 2023)	

RETAINING WALL NOTES

1. THE LOCATION AND CONFIGURATION OF DEPICTED RETAINING WALLS SHALL BE SUBJECT TO CHANGE DURING THE CONSTRUCTION DOCUMENTS (CD) DESIGN STAGE.
2. THE MODULAR CONCRETE UNIT (MCU) WALL SYSTEM MANUFACTURER AND BLOCK TYPE SHALL BE SELECTED DURING THE CD DESIGN STAGE. FOR BUDGETARY ESTIMATING PURPOSES, THE MCU WALL SYSTEM SHALL BE COMPARABLE TO THE REDI–ROCK WALL SYSTEM.

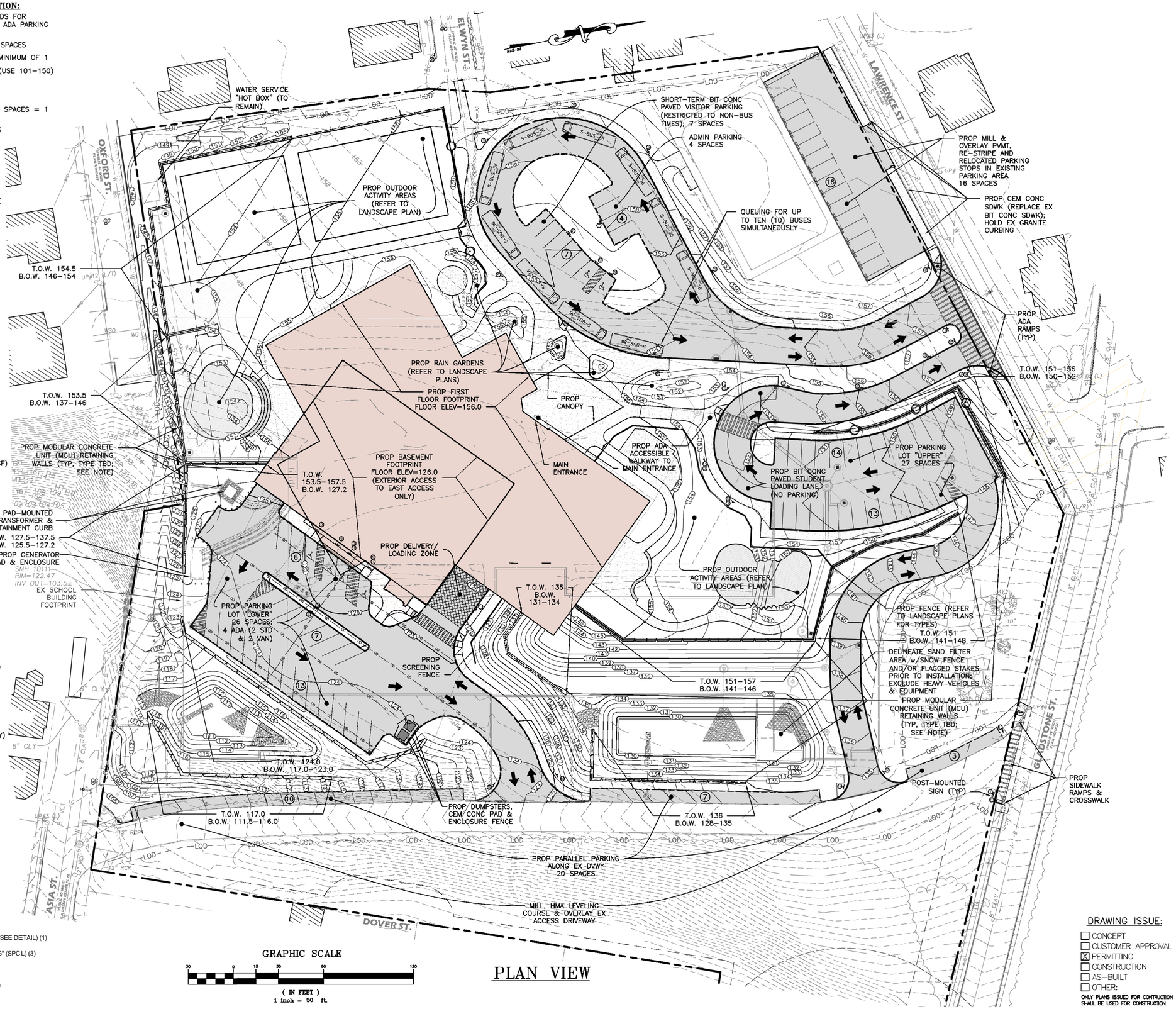
REQUIRED PERMITTING NOTES

THE PROJECT SHALL REQUIRE THE FOLLOWING STATE AND LOCAL PERMIT APPROVALS:

- RIDEM RIPDES NOTICE OF INTENT APPROVAL
- CITY OF CRANSTON DEVELOPMENT PLAN REVIEW (DPR) APPROVAL
- CITY OF CRANSTON MAJOR LAND DEVELOPMENT (MLD) APPROVAL
- CITY OF CRANSTON ZONING BOARD APPROVAL OF HEIGHT VARIANCE (RECEIVED)
- VEOLIA WATER SEWER CONNECTION APPROVAL
- PROVIDENCE WATER SUPPLY BOARD WATER SERVICES APPROVAL (DOMESTIC & FIRE SUPPLY)
- RI ENERGY SERVICE APPROVAL

POST–MOUNTED SIGNAGE LEGEND

1. "STOP" (MUTCD R1-1) (3)
2. "DO NOT ENTER" (MUTCD R5-1) (2)
3. "ONE WAY" (MUTCD R6-2) (8)
4. "BUS DRIVEWAY/SHORT-TERM VISITOR PARKING ONLY" (SPCL) (1)
5. "NO PARKING - BUS LOADING ONLY" (SPCL) (6)
6. "NO STUDENT DROP-OFF/PICK-UP - USE SCHOOL DRIVEWAY" (SPCL) (1)
7. "RESERVED PARKING - SCHOOL ADMINISTRATORS" (SPCL) (1)
8. "VISITOR PARKING" (SPCL) (1)
9. "HANDICAPPED PARKING" (MUTCD D9-6) (6)
10. "VAN-ACCESSIBLE" (MUTCD D9-6P) (2)
11. "NO PARKING - DELIVERY LOADING ZONE" (SPCL - SEE DETAIL) (1)
12. "STUDENT DROP-OFF/PICK-UP ZONE - NO PARKING" (SPCL) (3)
13. "TO GYM PARKING, DELIVERY ENTRANCE & STUDENT DROP-OFF/PICK-UP ZONE" (SPCL) (2)
14. "TO STUDENT DROP-OFF/PICK-UP ZONE" (SPCL) (2)
15. "GYM PARKING/DELIVERY ENTRANCE" (SPCL) (2)



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PLAN VIEW

DRAWING ISSUE:

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DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Site Layout & Grading Plan

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C101

STORMWATER MANAGEMENT REQUIREMENTS:

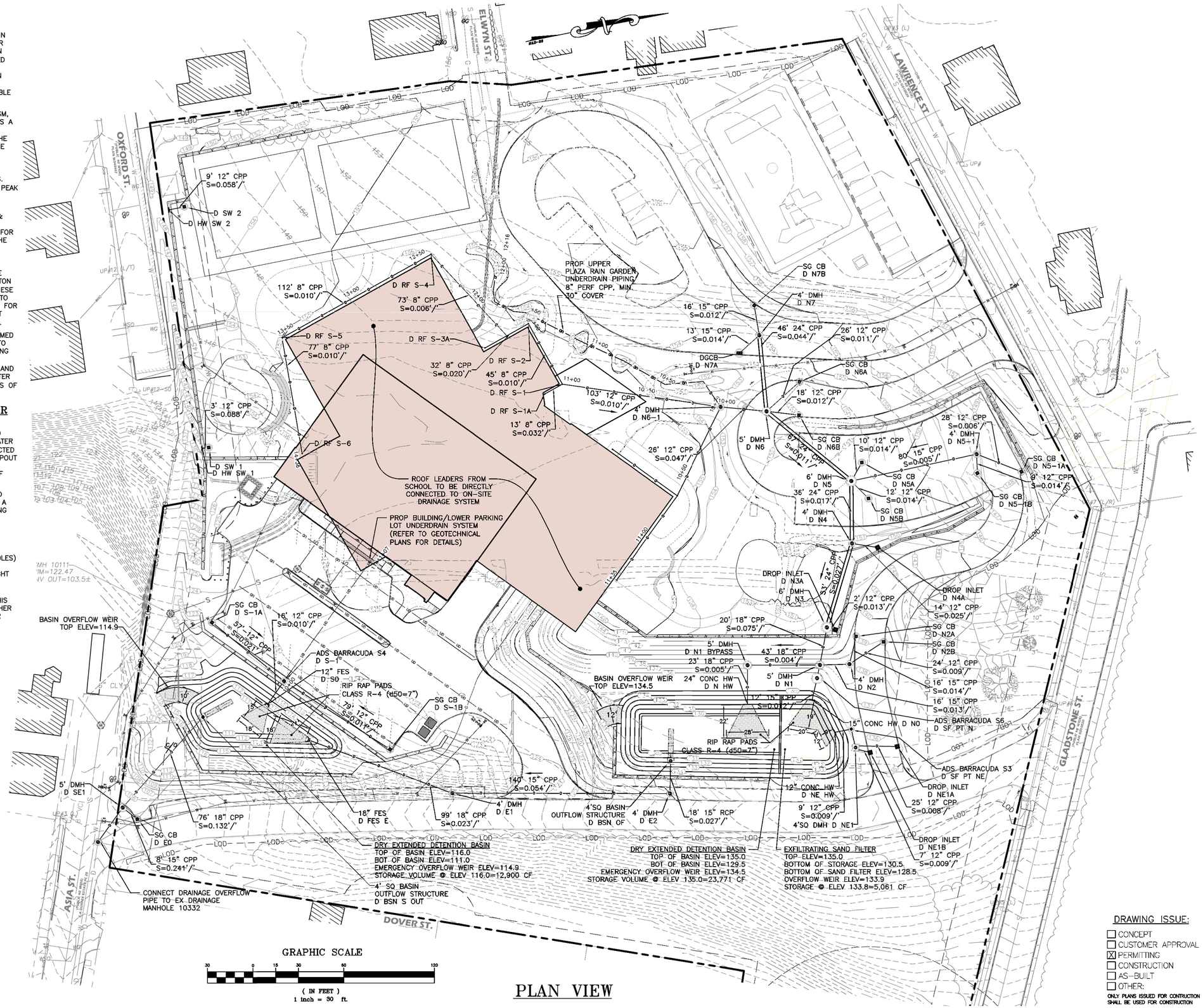
1. STORMWATER MANAGEMENT DESIGN IS IN ACCORDANCE WITH THE RI STORMWATER MANAGEMENT DESIGN AND INSTALLATION RULES (SMDIR), WHICH IS THE CODIFIED VERSION OF THE 2015 RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (RISDISM). BOTH DOCUMENTS ARE CONSIDERED APPLICABLE TO THE PROJECT.
2. IN THE CONTEXT OF THE SMDIR/RISDISM, THIS PROJECT SHALL BE CLASSIFIED AS A "REDEVELOPMENT" PROJECT. REDEVELOPMENT PROJECTS REQUIRE THE PROVISION OF GROUNDWATER RECHARGE (INFILTRATION) AND WATER QUALITY TREATMENT FOR 50% OF EXISTING IMPERIOUS SURFACES AND 100% OF PROPOSED NEW IMPERVIOUS SURFACES. THE SMDIR/RISDISM DO NOT REQUIRE PEAK FLOW RATE MITIGATION FOR REDEVELOPMENT PROJECTS.
3. THE CITY OF CRANSTON SUBDIVISION & LAND DEVELOPMENT REGULATIONS DO REQUIRE PEAK FLOW RATE MITIGATION FOR ALL STORMS UP TO AND INCLUDING THE 100-YEAR STORM EVENT.

SUBSURFACE MATERIAL NOTES:

1. PER THE USDA WEB SOIL SURVEY, THE ENTIRE PARCEL IS UNDERLAIN BY CANTON URBAN LAND COMPLEX SOILS (CB). THESE SOILS ARE CLASSIFIED AS BELONGING TO HSG B, AND ARE GENERALLY SUITABLE FOR INFILTRATING STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES (BMP'S).
2. SOIL EVALUATIONS HAVE BEEN PERFORMED AT VARIOUS LOCATIONS ON THE SITE TO MORE PRECISELY DETERMINE UNDERLYING SOIL CHARACTERISTICS (SOIL LAYER MATERIALS, CONSISTENCY, THICKNESS) AND ESTIMATED SEASONAL HIGH GROUNDWATER TABLE (ESHGWT) DEPTHS IN THE AREAS OF PROSPECTIVE STORMWATER BMP'S.

SITE DRAINAGE/STORMWATER BMP NOTES:

1. ROOF RUNOFF WILL BE CAPTURED AND DIRECTED TO THE PROPOSED STORMWATER BMP'S VIA ROOF DOWNSPOUTS CONNECTED TO SUBSURFACE PIPING. FINAL DOWNSPOUT LOCATIONS FROM THE BUILDING AND CONNECTIONS TO THE PERIMETER ROOF DRAIN PIPING ARE T.B.D.
2. STORMWATER BMP LOCATIONS DEPICTED HEREON ARE SUBJECT TO CHANGE AS A RESULT OF MODIFICATIONS MADE DURING THE CONSTRUCTION DOCUMENTS (CD) DESIGN STAGE AND/OR MODIFICATIONS REQUIRED BY CITY/RIDEM REVIEWS.
3. IT IS ANTICIPATED THAT DRAINAGE STRUCTURES (CATCH BASINS & MANHOLES) SHALL BE PRECAST CONCRETE, AND DRAINAGE PIPING SHALL BE WATER-TIGHT HIGH-DENSITY POLYETHYLENE (HDPE) DOUBLE-WALL CORRUGATED PIPE (AKA CORRUGATED PLASTIC PIPE, "CPP"). THIS DOES NOT PRECLUDE THE USE OF OTHER DRAINAGE MATERIALS, AS REQUIRED OR APPROPRIATE.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PLAN VIEW

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DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

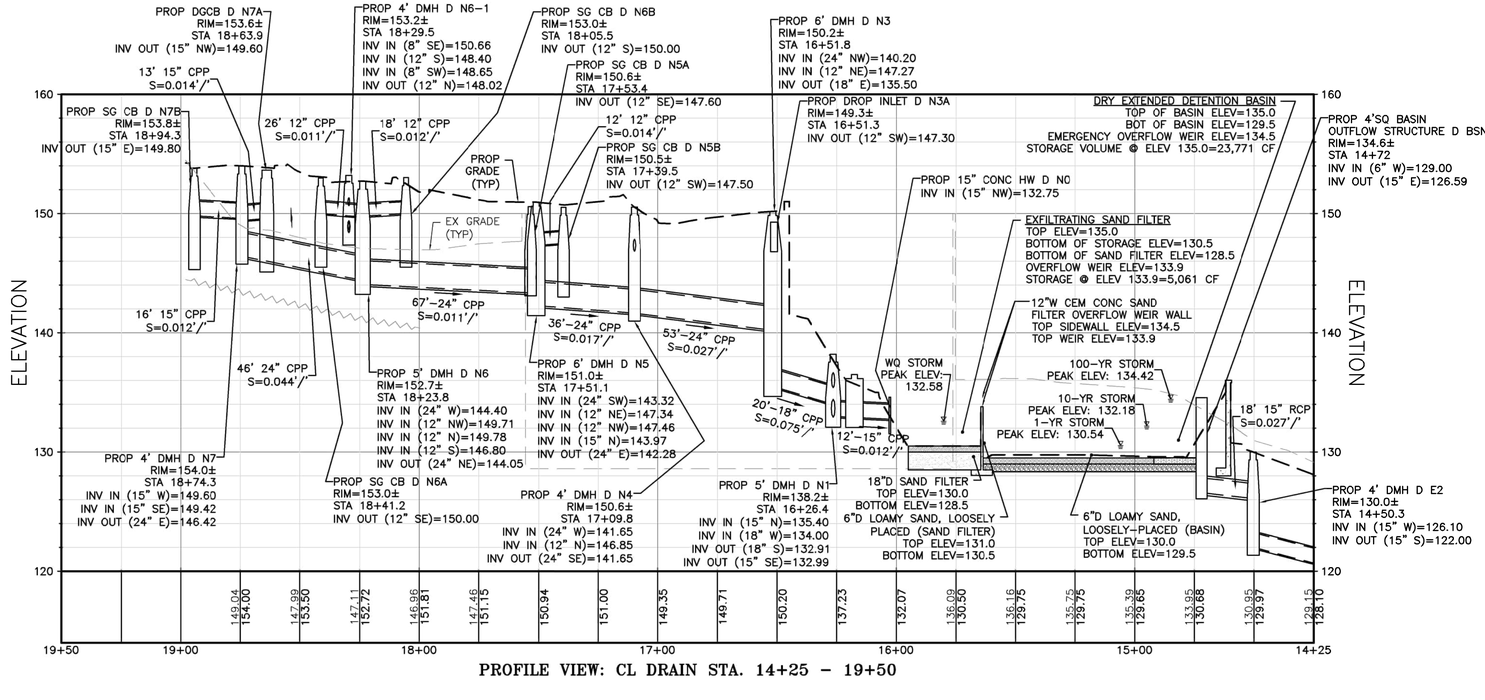
Stormwater Management Plan

DRAWING HISTORY:

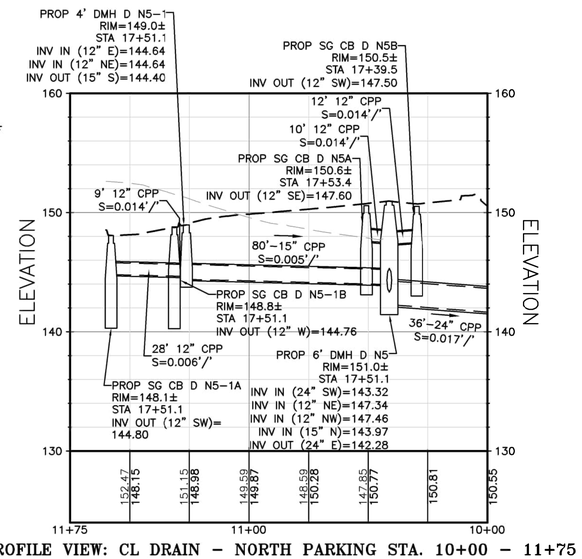
NO.	DATE	DESCRIPTION

SHEET #:

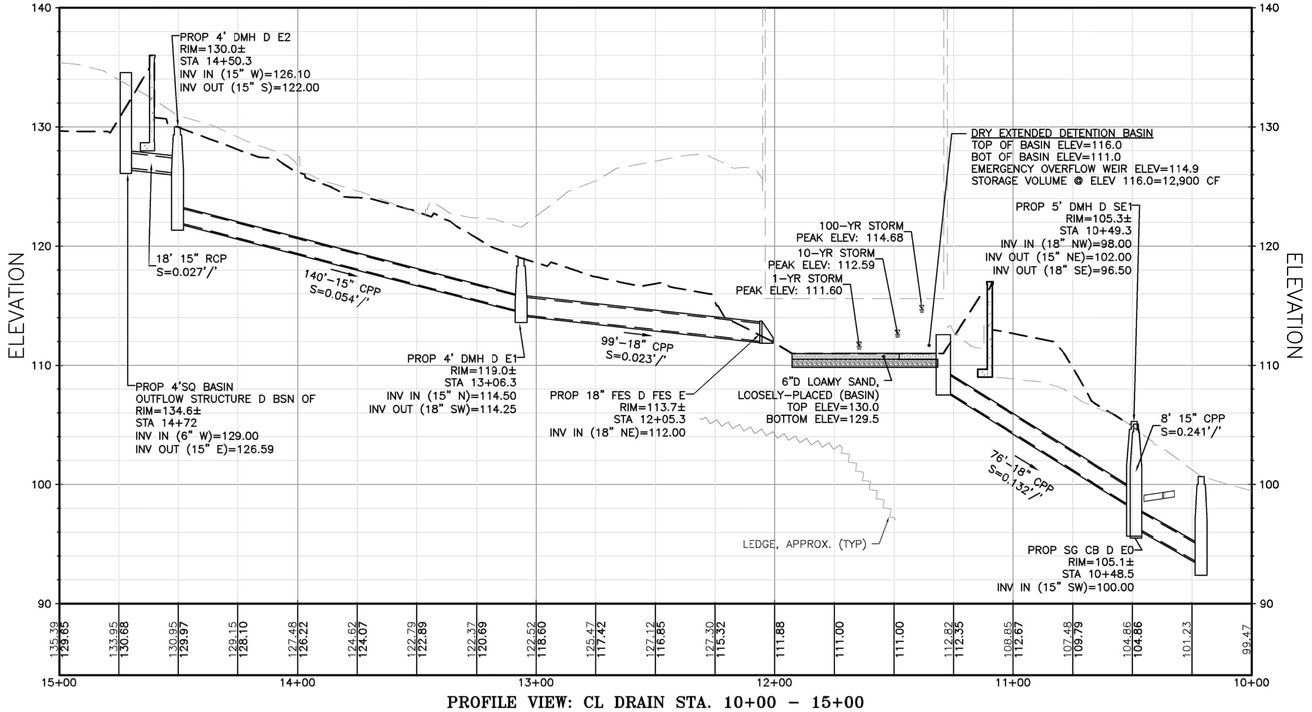
C102



PROFILE VIEW: CL DRAIN STA. 14+25 - 19+50



PROFILE VIEW: CL DRAIN - NORTH PARKING STA. 10+00 - 11+75



PROFILE VIEW: CL DRAIN STA. 10+00 - 15+00

STORMWATER SYSTEM PROFILE VIEWS

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
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Traverse Landscape Architects
150 Chestnut St. 4th Fl.
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Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Stormwater Management Profiles

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C103

STRUCTURE TABLE – DRAIN	
STRUCTURE NAME	STRUCTURE DETAILS
D BSN OF	REF ALGN: CL DRAIN STA 14+72.0 O/S 0.0 RIM=134.6± D–P BSN N UD INV IN = 129.00 D–P BSN OF INV OUT = 126.59
D BSN S OUT	REF ALGN: CL DRAIN STA 11+29.3 O/S 0.0 RIM=112.6± D–P S BSN OF INV OUT = 108.00 D–P BSN S UD INV OUT = 110.50
D E0	REF ALGN: CL DRAIN STA 10+48.5 O/S 12.3R RIM=105.1± D–P E0 INV IN = 100.00
D E1	REF ALGN: CL DRAIN STA 13+06.3 O/S 0.0L RIM=119.0± D–P E3 INV IN = 114.50 D–P E2 INV OUT = 114.25
D E2	REF ALGN: CL DRAIN STA 14+50.3 O/S 0.0 RIM=130.0± D–P BSN OF INV IN = 126.10 D–P E3 INV OUT = 122.00
D EX10332	REF ALGN: CL DRAIN STA 10+21.2 O/S 0.0 RIM=100.7± D–P SE–1 INV IN = 93.30
D FES E	REF ALGN: CL DRAIN STA 12+05.3 O/S 0.0 RIM=113.7± D–P E2 INV IN = 112.00
D HW SW 1	REF ALGN: SOUTH SWALE CL STA 11+63.7 O/S 8.3R RIM=152.0± D–P SW 1 INV IN = 138.00
D HW SW 2	REF ALGN: SOUTH SWALE CL STA 13+21.9 O/S 7.3R RIM=153.0± D–P SW 2 INV IN = 148.50
D N HW	REF ALGN: CL DRAIN STA 15+42.7 O/S 17.2L RIM=134.6± D–P N0 INV IN = 132.50
D N0	REF ALGN: CL DRAIN STA 16+02.8 O/S 0.0 RIM=134.6± D–P N SF N1 INV IN = 132.75
D N1* DIVERSION MANHOLE	REF ALGN: CL DRAIN STA 16+26.4 O/S 0.0L RIM=138.2± D–P N2 INV IN = 135.40 D–P N3 INV IN = 134.00 D–P N1 INV OUT = 132.91 D–P N SF N2 INV OUT = 132.99
D N1 BYPASS	REF ALGN: CL DRAIN STA 15+42.7 O/S 43.2L RIM=137.7± D–P N1 INV IN = 132.72 D–P N0 INV OUT = 132.62
D N2	REF ALGN: CL DRAIN STA 16+30.6 O/S 19.1R RIM=139.2± D–P N2B INV IN = 135.69 D–P N2A INV IN = 135.69 D–P N2 INV OUT = 135.60
D N2A	REF ALGN: CL DRAIN STA 16+49.6 O/S 20.1R RIM=139.1± D–P N2A INV OUT = 135.90
D N2B	REF ALGN: CL DRAIN STA 16+49.4 O/S 38.6R RIM=138.9± D–P N2B INV OUT = 135.90

STRUCTURE TABLE – DRAIN	
STRUCTURE NAME	STRUCTURE DETAILS
D N3	REF ALGN: CL DRAIN STA 16+51.8 O/S 0.0 RIM=150.2± D–P N4 INV IN = 140.20 D–P N3A INV IN = 147.27 D–P N3 INV OUT = 135.50
D N3A	REF ALGN: CL DRAIN STA 16+51.3 O/S 5.7R RIM=149.3± D–P N3A INV OUT = 147.30
D N4	REF ALGN: CL DRAIN STA 17+09.8 O/S 0.0 RIM=150.6± D–P N5 INV IN = 141.65 D–P N4A INV IN = 146.85 D–P N4 INV OUT = 141.65
D N4A	REF ALGN: CL DRAIN STA 17+09.8 O/S 17.3R RIM=149.3± D–P N4A INV OUT = 147.20
D N5	REF ALGN: CL DRAIN STA 17+51.1 O/S 0.0 RIM=151.0± D–P N6 INV IN = 143.32 D–P N5B INV IN = 147.34 D–P N5A INV IN = 147.46 D–P N5–1 INV IN = 143.97 D–P N5 INV OUT = 142.28
D N5–1	REF ALGN: CL DRAIN STA 17+51.1 O/S 85.0R RIM=149.0± D–P N5–1B INV IN = 144.64 D–P N5–1A INV IN = 144.64 D–P N5–1 INV OUT = 144.40
D N5–1A	REF ALGN: CL DRAIN STA 17+51.1 O/S 112.7R RIM=148.1± D–P N5–1A INV OUT = 144.80
D N5–1B	REF ALGN: CL DRAIN STA 17+51.1 O/S 83.7R RIM=148.8± D–P N5–1B INV OUT = 144.76
D N5A	REF ALGN: CL DRAIN STA 17+53.4 O/S 14.0R RIM=150.6± D–P N5A INV OUT = 147.60
D N5B	REF ALGN: CL DRAIN STA 17+39.5 O/S 11.3R RIM=150.5± D–P N5B INV OUT = 147.50
D N6	REF ALGN: CL DRAIN STA 18+23.8 O/S 0.0 RIM=152.7± D–P N7 INV IN = 144.40 D–P N6A INV IN = 149.71 D–P N6B INV IN = 149.78 D–P N6–1 INV IN = 146.80 D–P N6 INV OUT = 144.05
D N6–1	REF ALGN: CL DRAIN STA 18+29.5 O/S 29.8L RIM=153.2± D–P RF N–1 INV IN = 150.66 D–P RF S–1 INV IN = 148.40 D–P UD W–0 INV IN = 148.65 D–P N6–1 INV OUT = 148.02
D N6A	REF ALGN: CL DRAIN STA 18+41.2 O/S 23.6R RIM=153.0± D–P N6A INV OUT = 150.00
D N6B	REF ALGN: CL DRAIN STA 18+05.5 O/S 11.7R RIM=153.0± D–P N6B INV OUT = 150.00
D N7	REF ALGN: CL DRAIN STA 18+74.3 O/S 0.0 RIM=154.0± D–P N7B INV IN = 149.60 D–P N7A INV IN = 149.42 D–P N7 INV OUT = 146.42
D N7A	REF ALGN: CL DRAIN STA 18+63.9 O/S 14.1L RIM=153.6± D–P N7A INV OUT = 149.60

STRUCTURE TABLE – DRAIN	
STRUCTURE NAME	STRUCTURE DETAILS
D N7B	REF ALGN: CL DRAIN STA 18+94.3 O/S 0.0 RIM=153.8± D–P N7B INV OUT = 149.80
D NE HW	REF ALGN: CL DRAIN STA 15+83.1 O/S 17.9R RIM=134.7± D–P SF NE1 INV IN = 133.00
D NE1	REF ALGN: CL DRAIN STA 15+82.4 O/S 33.5R RIM=136.3± D–P NE1B INV IN = 133.44 D–P NE1A INV IN = 133.30 D–P SF NE2 INV OUT = 133.20
D NE1A	REF ALGN: CL DRAIN STA 15+82.4 O/S 60.2R RIM=135.5± D–P NE1A INV OUT = 133.50
D NE1B	REF ALGN: CL DRAIN STA 15+82.4 O/S 43.9R RIM=135.5± D–P NE1B INV OUT = 133.50
D RF N–1	REF ALGN: CL DRAIN – ROOF N STA 10+65.6 O/S 0.0 RIM=155.2± D–P RF N–2A INV IN = 151.31 D–P RF N–2B INV IN = 151.32 D–P RF N–1 INV OUT = 151.32
D RF N–2A	REF ALGN: CL DRAIN – ROOF N STA 11+34.1 O/S 0.0 RIM=156.0± D–P RF N–2A INV OUT = 152.00
D RF N–2B	REF ALGN: CL DRAIN – ROOF N STA 10+56.7 O/S 52.0R RIM=155.6± D–P RF N–2B INV OUT = 151.85
D RF S–1	REF ALGN: CL DRAIN – ROOF S STA 11+05.8 O/S 0.0 RIM=155.7± D–P RF S–2 INV IN = 149.80 D–P RF S–1A INV IN = 149.80 D–P RF S–1 INV OUT = 149.46
D RF S–1A	REF ALGN: CL DRAIN – ROOF S STA 11+05.8 O/S 13.4L RIM=155.9± D–P RF S–1A INV OUT = 150.20
D RF S–2	REF ALGN: CL DRAIN – ROOF S STA 11+51.8 O/S 0.0 RIM=155.3± D–P RF S–3 INV IN = 150.26 D–P RF S–2 INV OUT = 150.26
D RF S–3A	REF ALGN: CL DRAIN – ROOF S STA 11+72.1 O/S 16.0L RIM=155.8± D–P RF S–3A INV OUT = 150.92
D RF S–4	REF ALGN: CL DRAIN – ROOF S STA 12+41.8 O/S 0.0 RIM=156.0± D–P RF S–5 INV IN = 151.06 D–P RF S–4 INV OUT = 151.05
D RF S–5	REF ALGN: CL DRAIN – ROOF S STA 13+54.9 O/S 0.0 RIM=155.0± D–P RF S–6 INV IN = 152.20 D–P RF S–5 INV OUT = 152.19
D RF S–6	REF ALGN: CL DRAIN – ROOF S STA 14+32.6 O/S 0.0 RIM=155.9± D–P RF S–6 INV OUT = 153.00
D RF S 3–4	REF ALGN: SOUTH SWALE CL STA 12+08.6 O/S 217.0R RIM=158.9± D–P RF S–3A INV IN = 150.59 D–P RF S–4 INV IN = 150.59 D–P RF S–3 INV OUT = 150.59

STRUCTURE TABLE – DRAIN	
STRUCTURE NAME	STRUCTURE DETAILS
D S–1	REF ALGN: CL DRAIN STA 11+75.8 O/S 30.5L RIM=124.0± D–P S–1A INV IN = 117.77 D–P S–1B INV IN = 118.00 D–P UD 1 INV IN = 120.47 D–P S–1 INV OUT = 113.16
D S–1A	REF ALGN: CL DRAIN STA 11+43.5 O/S 56.0L RIM=123.0± D–P S–1A INV OUT = 119.00
D S–1B	REF ALGN: CL DRAIN STA 12+57.6 O/S 12.9L RIM=123.2± D–P S–1B INV OUT = 118.83
D S0	REF ALGN: CL DRAIN STA 11+71.4 O/S 12.5L RIM=114.2± D–P S–1 INV IN = 113.00
D SE1	REF ALGN: CL DRAIN STA 10+49.3 O/S 0.0 RIM=105.3± D–P S BSN OF INV IN = 98.00 D–P E0 INV OUT = 102.00 D–P SE–1 INV OUT = 96.50
D SF PT N	REF ALGN: CL DRAIN STA 16+17.6 O/S 0.0 RIM=136.5± D–P N SF N2 INV IN = 132.89 D–P N SF N1 INV OUT = 132.89
D SF PT NE	REF ALGN: SOUTH SWALE CL STA ??? O/S ?????? RIM=136.9± D–P SF NE2 INV IN = 133.09 D–P SF NE1 INV OUT = 133.09
D SW 1	REF ALGN: SOUTH SWALE CL STA 11+64.2 O/S 12.8R RIM=152.1± D–P SW 1 INV OUT = 138.23
D SW 2	REF ALGN: SOUTH SWALE CL STA 13+22.6 O/S 17.7R RIM=152.9± D–P SW 2 INV OUT = 149.00
D UD SE 1–2	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+08.0 O/S 0.0 RIM=121.1± D–P UD SE 2 INV IN = 120.51 D–P UD SE 1–A INV IN = 120.51 D–P UD SE 1–B INV IN = 120.51 D–P UD 1 INV OUT = 120.51
D UD SE 1–A	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+07.9 O/S 59.2L RIM=123.2± D–P UD SE 1–A INV OUT = 121.10
D UD SE 1–B	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+08.3 O/S 82.3R RIM=123.4± D–P UD SE 1–B INV OUT = 121.33
D UD SE 2–3	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+34.0 O/S 0.0 RIM=121.2± D–P UD SE 3 INV IN = 120.64 D–P UD SE 2–A INV IN = 120.64 D–P UD SE 2–B INV IN = 120.64 D–P UD SE 2 INV OUT = 120.64
D UD SE 2–A	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+33.9 O/S 60.1L RIM=123.7± D–P UD SE 2–A INV OUT = 121.24
D UD SE 2–B	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+34.3 O/S 82.6R RIM=123.9± D–P UD SE 2–B INV OUT = 121.47
D UD SE 3–4	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+60.0 O/S 0.0 RIM=121.3± D–P UD SE 4 INV IN = 120.77 D–P UD SE 3–A INV IN = 120.77 D–P UD SE 3–B INV IN = 120.77 D–P UD SE 3 INV OUT = 120.77

STRUCTURE TABLE – DRAIN	
STRUCTURE NAME	STRUCTURE DETAILS
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D UD SE 3–B	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+60.4 O/S 138.0R RIM=124.4± D–P UD SE 3–B INV OUT = 122.15
D UD SE 4–5	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+86.0 O/S 0.0 RIM=121.8± D–P UD SE 5 INV IN = 120.90 D–P UD SE 4–A–1 INV IN = 120.90 D–P UD SE 4–B INV IN = 120.90 D–P UD SE 4 INV OUT = 120.90
D UD SE 4–A	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+85.9 O/S 52.9L RIM=124.6± D–P UD SE 4–A–2 INV OUT = 121.97
D UD SE 4–A 1–2	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+86.0 O/S 10.4L RIM=122.3± D–P UD SE 4–A–2 INV IN = 121.73 D–P UD SE 4–A–1 INV OUT = 121.73
D UD SE 4–B	REF ALGN: CL DRAIN – UNDERDRAIN STA 10+86.3 O/S 92.8R RIM=125.1± D–P UD SE 4–B INV OUT = 121.36
D UD W 0–1	REF ALGN: SOUTH SWALE CL STA 11+73.9 O/S 342.1R RIM=149.6± D–P UD W–1 INV IN = 148.85 D–P UD W–0 INV OUT = 148.85
D UD W 1–2	REF ALGN: SOUTH SWALE CL STA 11+74.1 O/S 316.6R RIM=149.9± D–P UD W–2 INV IN = 149.10 D–P UD W–1 INV OUT = 149.10
D UD W 2–3	REF ALGN: SOUTH SWALE CL STA 11+81.3 O/S 291.5R RIM=150.2± D–P UD W–3 INV IN = 149.42 D–P UD W–2 INV OUT = 149.42
D UD W 3–4	REF ALGN: SOUTH SWALE CL STA 11+98.8 O/S 264.1R RIM=150.5± D–P UD W–4 INV IN = 149.74 D–P UD W–3 INV OUT = 149.74
D UD W 4–5	REF ALGN: SOUTH SWALE CL STA 12+22.0 O/S 231.7R RIM=150.9± D–P UD W–5 INV IN = 150.14 D–P UD W–4 INV OUT = 150.14
D UD W 5–6	REF ALGN: SOUTH SWALE CL STA 12+23.8 O/S 223.8R RIM=151.0± D–P UD W–6 INV IN = 150.22 D–P UD W–5 INV OUT = 150.22
D UD W 6–7	REF ALGN: SOUTH SWALE CL STA 12+31.9 O/S 212.1R RIM=151.1± D–P UD W–7 INV IN = 150.34 D–P UD W–6 INV OUT = 150.34
D UD W 7–8	REF ALGN: SOUTH SWALE CL STA 12+39.5 O/S 212.4R RIM=151.2± D–P UD W–8 INV IN = 150.43 D–P UD W–7 INV OUT = 150.43

* DMH N1 IS A DIVERSION MANHOLE WITH AN INTERNAL BYPASS OVERFLOW WEIR AT ELEV 133.90.

REFER TO SHEET CD 104 – CIVIL DETAILS 4 FOR DETAIL ON DIVERSION STRUCTURE

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS–BUILT
- ☐ OTHER:

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Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
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N. Providence, RI 02904

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Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

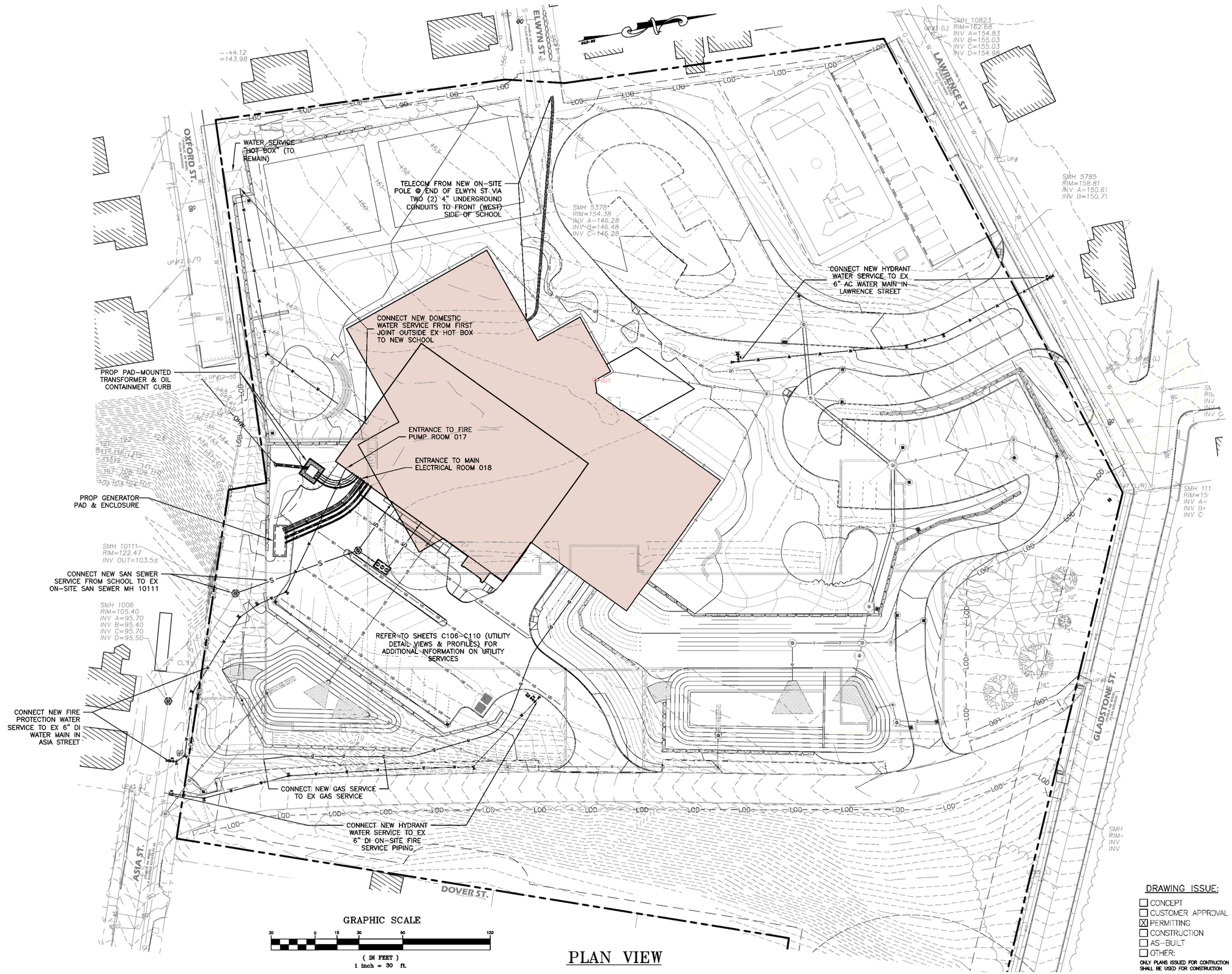
Stormwater System Tables

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C104



PLAN VIEW

DRAWING ISSUE:

- ☐ CONCEPT
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Providence, RI 02903

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Georgetown, MA01833

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DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

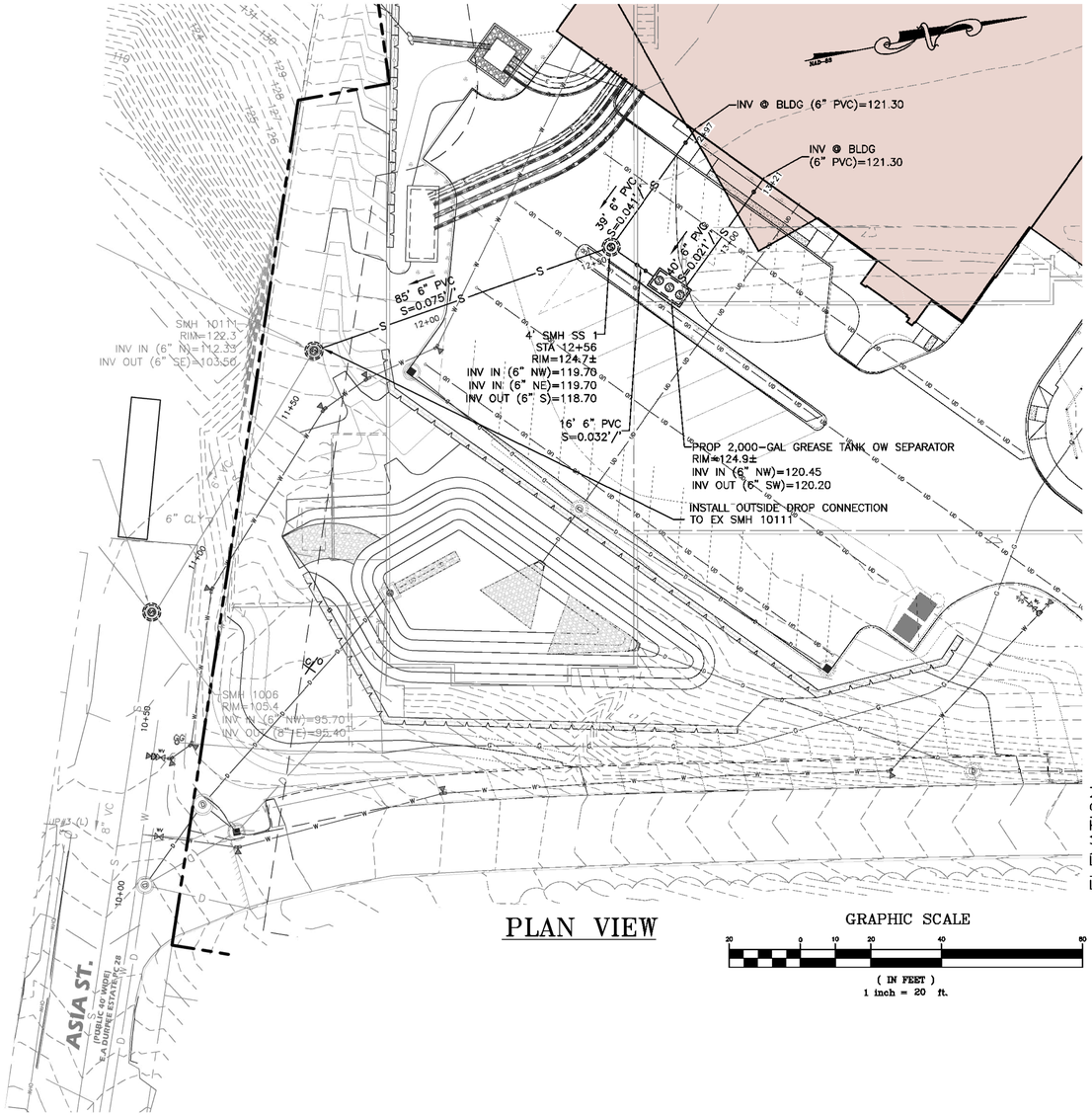
Utility Plan - Overall Site

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C105

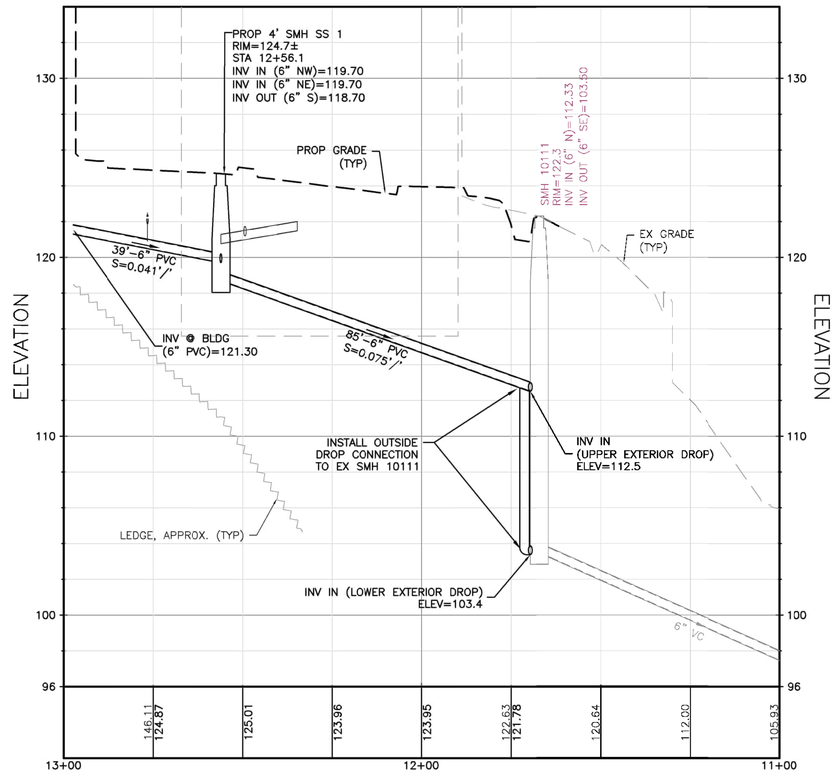


PLAN VIEW

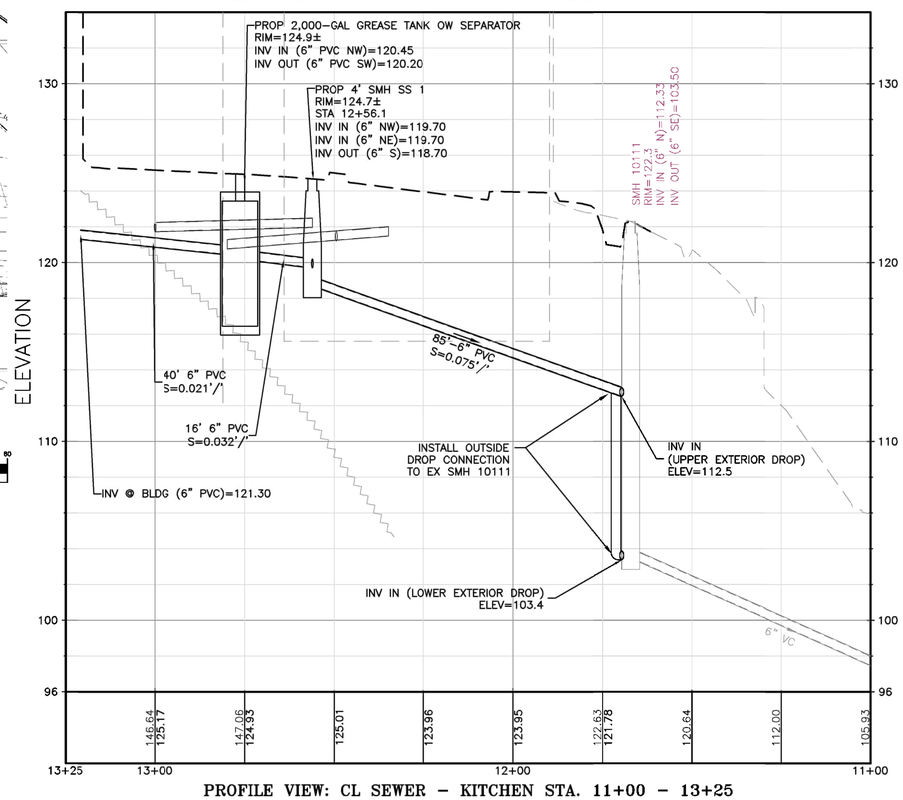
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



PROFILE VIEW: CL SEWER - DOMESTIC STA. 11+00 - 13+00



PROFILE VIEW: CL SEWER - KITCHEN STA. 11+00 - 13+25

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
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PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

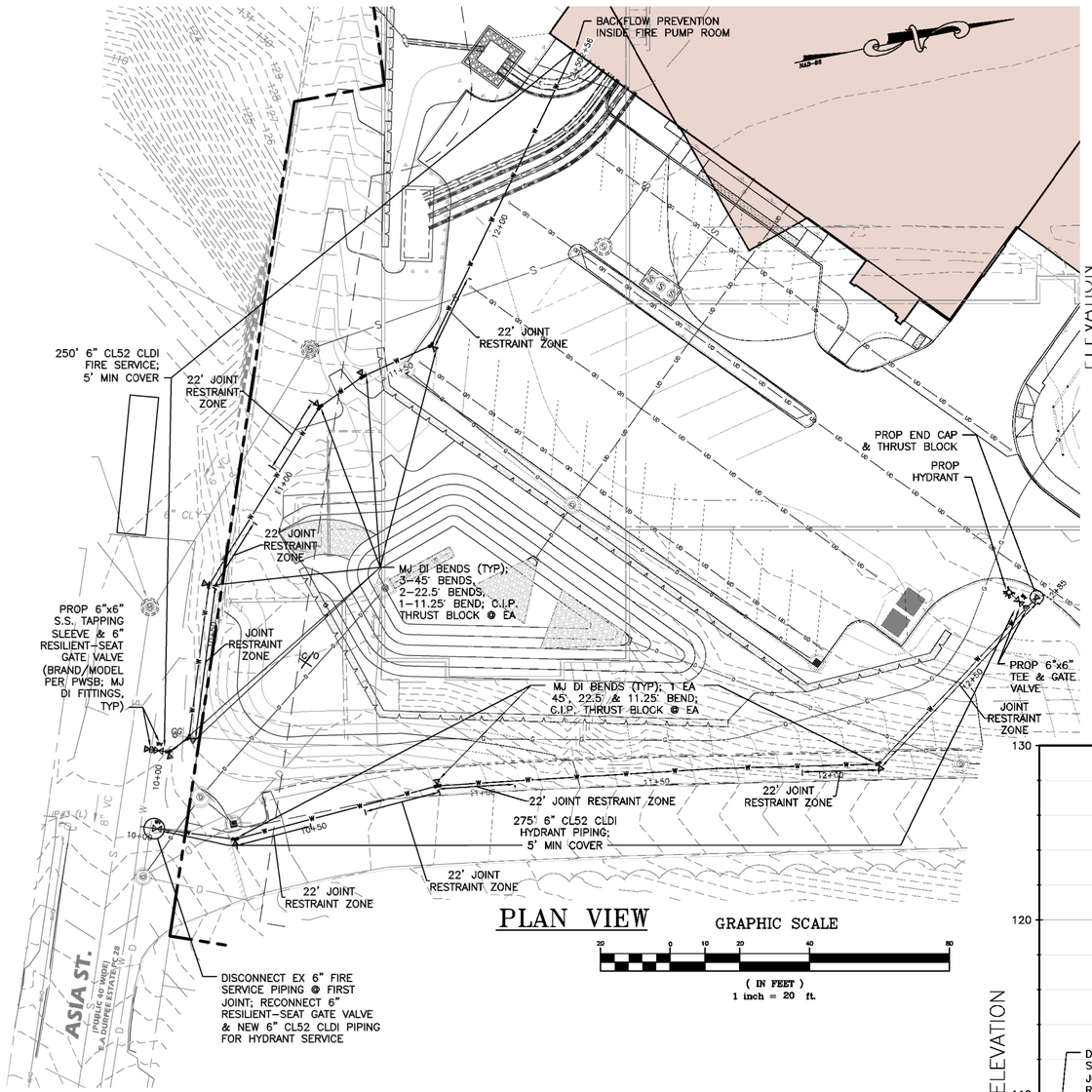
Utility Plan - Sanitary Sewer
Detail & Profile Views

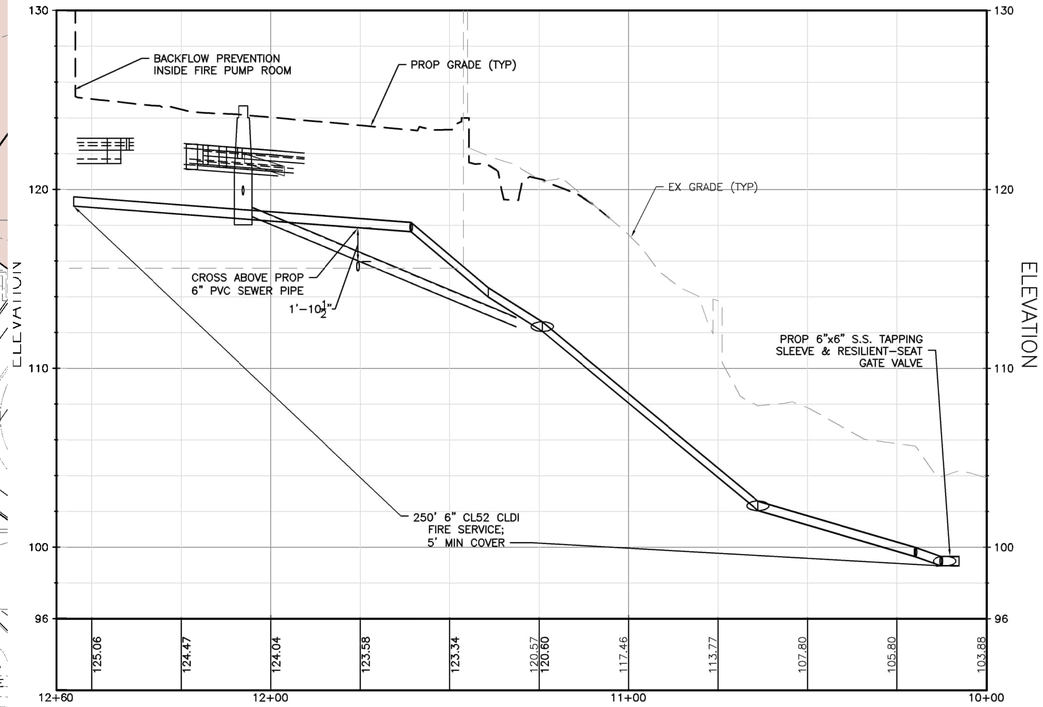
DRAWING HISTORY:

NO.	DATE	DESCRIPTION

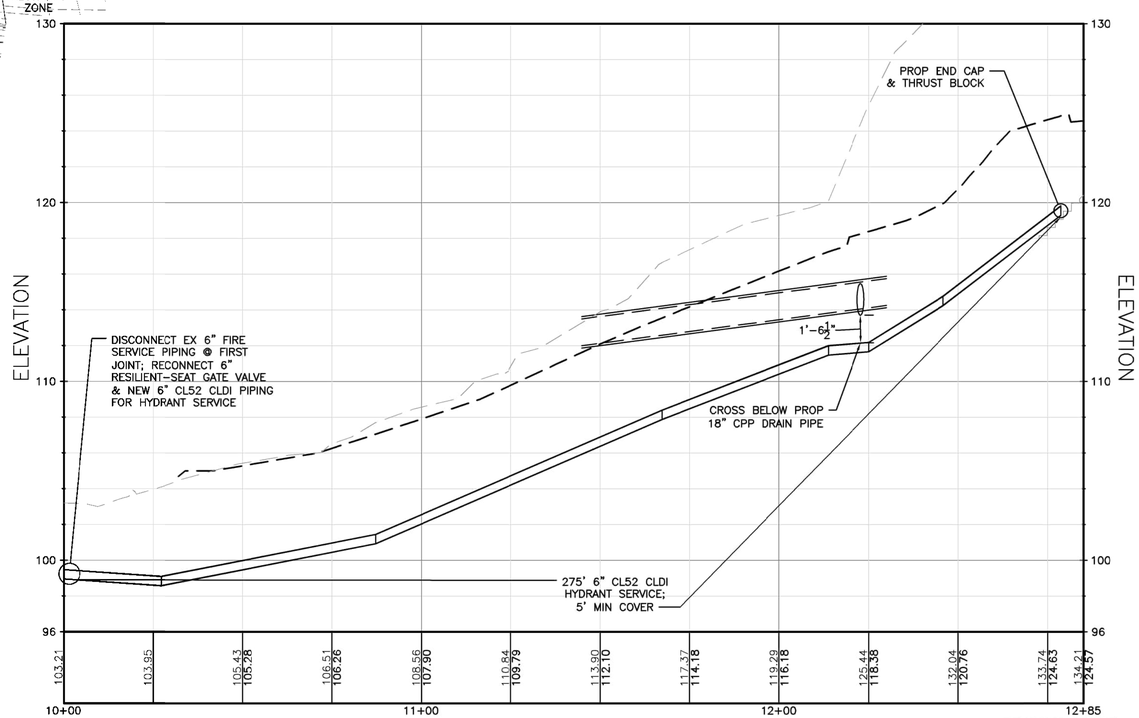
SHEET #:

C106





PROFILE VIEW: CL WATER - FIRE SERVICE STA. 10+00 - 12+60



PROFILE VIEW: CL WATER - HYDRANT SOUTH

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
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DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

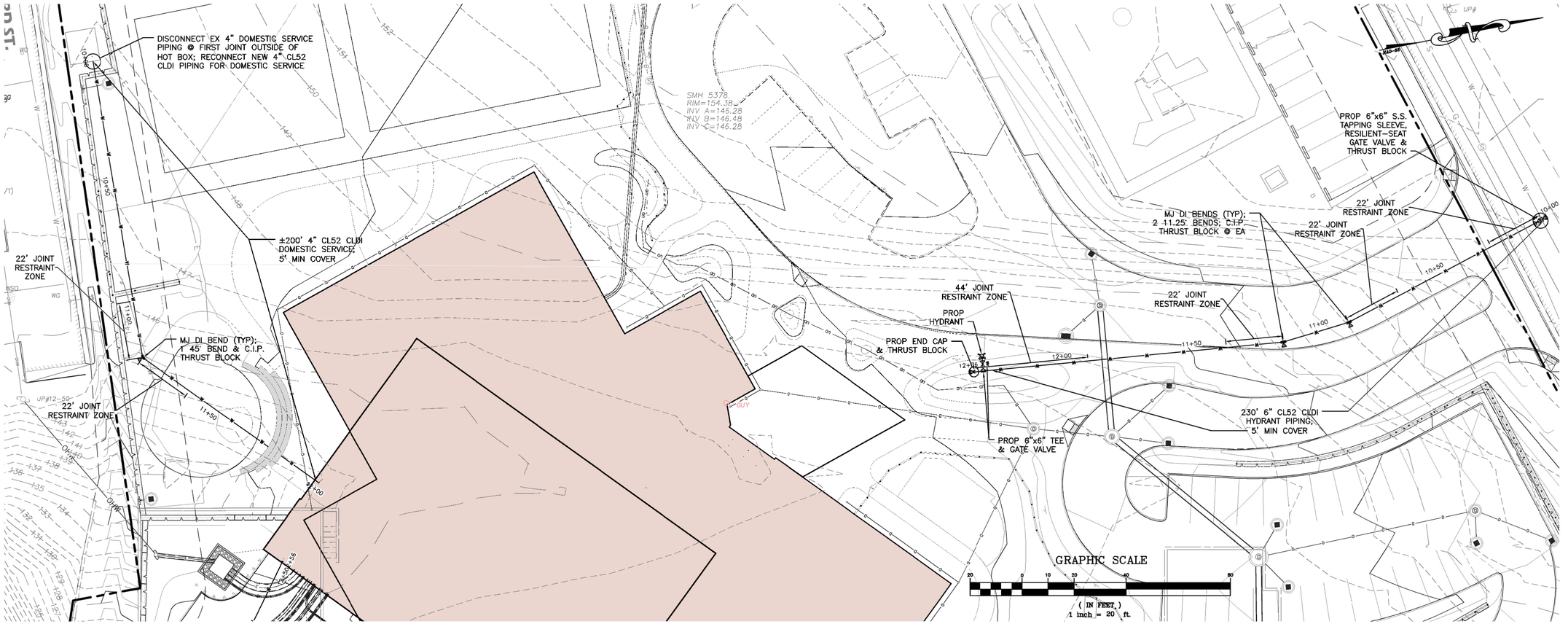
Utility Plan - Fire Protection & South Hydrant Water Services Detail & Profile Views

DRAWING HISTORY:

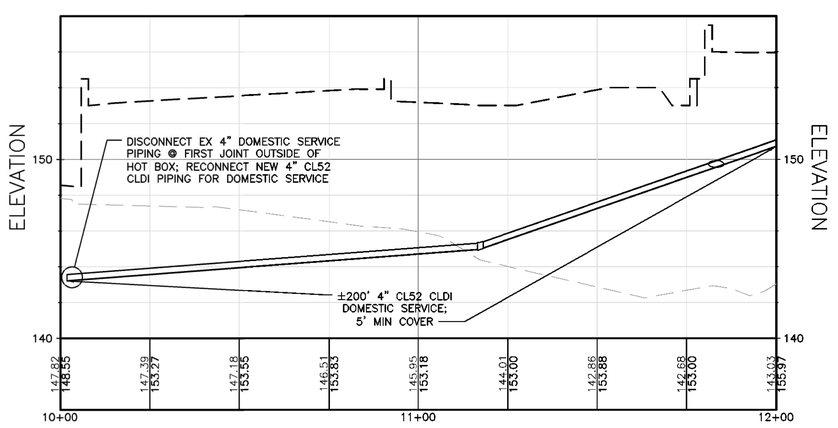
NO.	DATE	DESCRIPTION

SHEET #:

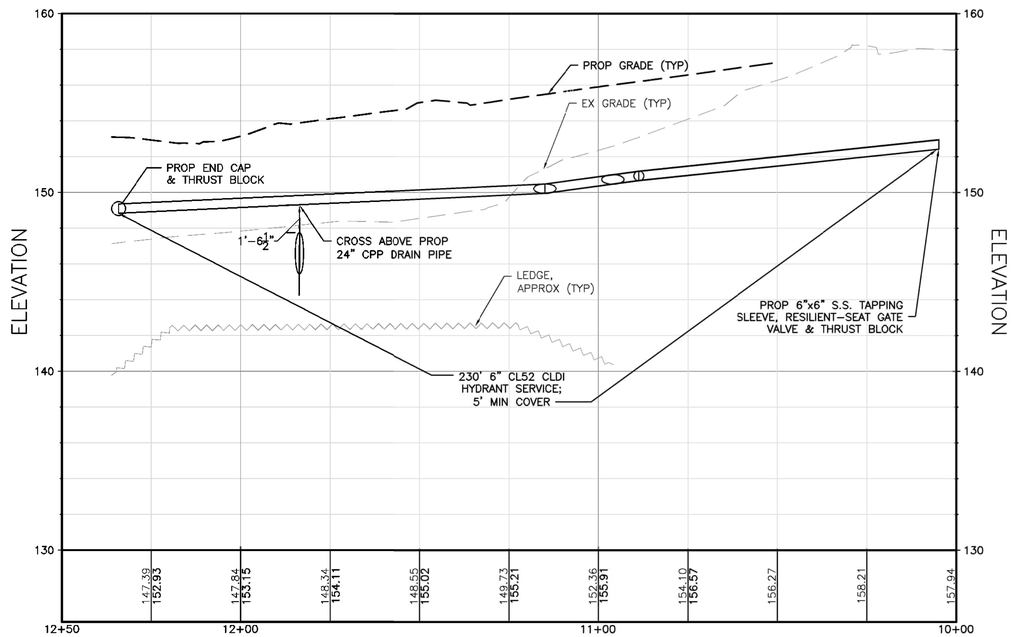
C107



PLAN VIEW



PROFILE VIEW: CL WATER - DOMESTIC



PROFILE VIEW: CL WATER - HYDRANT NORTH STA. 10+00 - 12+50

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
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- ☐ OTHER:

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PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
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CHECKED BY:	TJB

SHEET NAME:

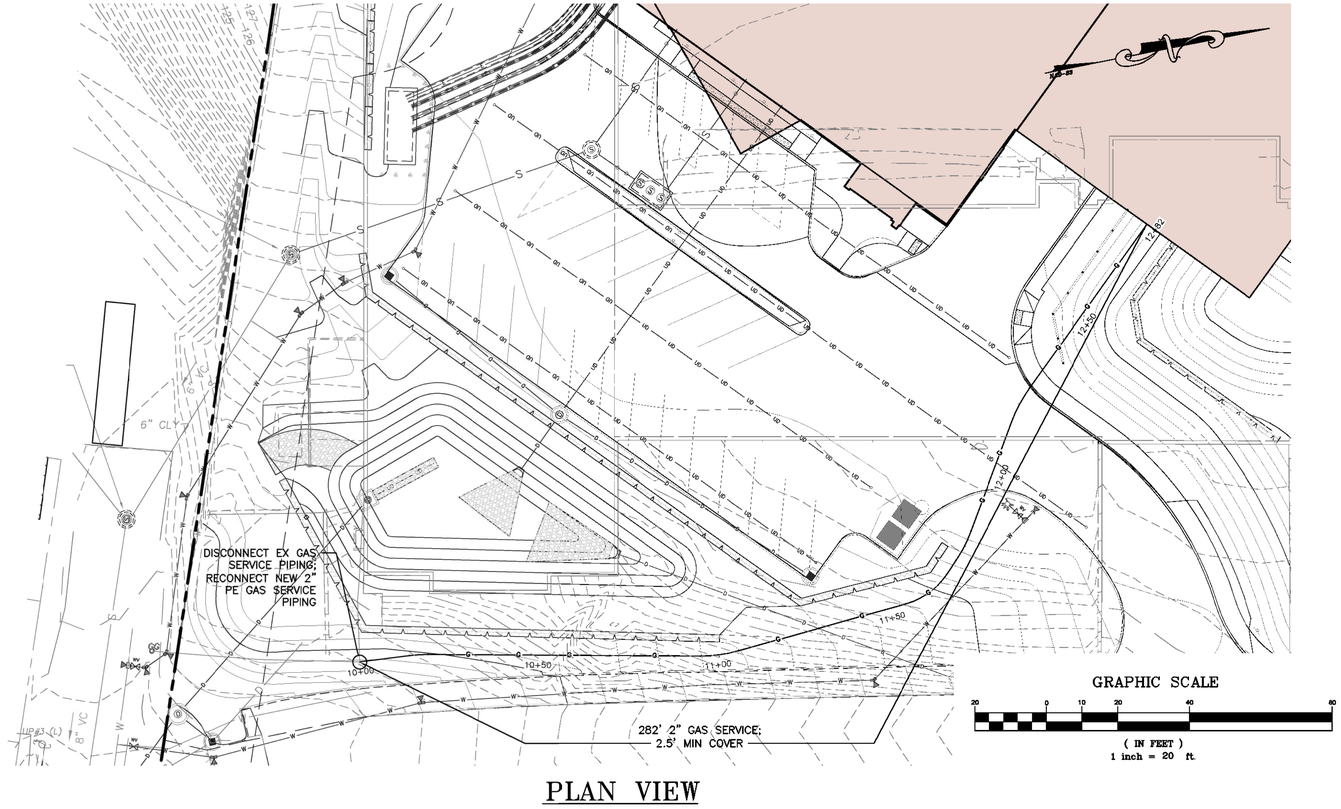
Utility Plan - Domestic & Hydrant
North Water Services
Detail & Profile Views

DRAWING HISTORY:

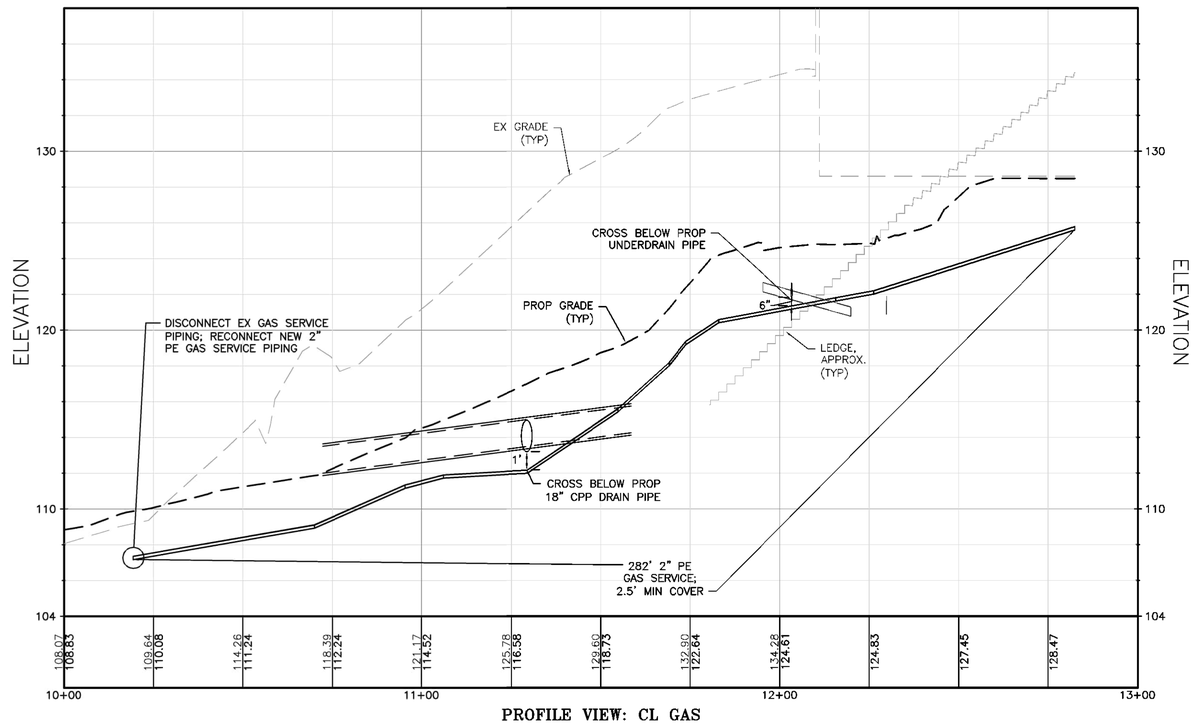
NO.	DATE	DESCRIPTION

SHEET #:

C108



PLAN VIEW



PROFILE VIEW: CL GAS

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS–BUILT
- ☐ OTHER:

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PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
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PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
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SHEET NAME:

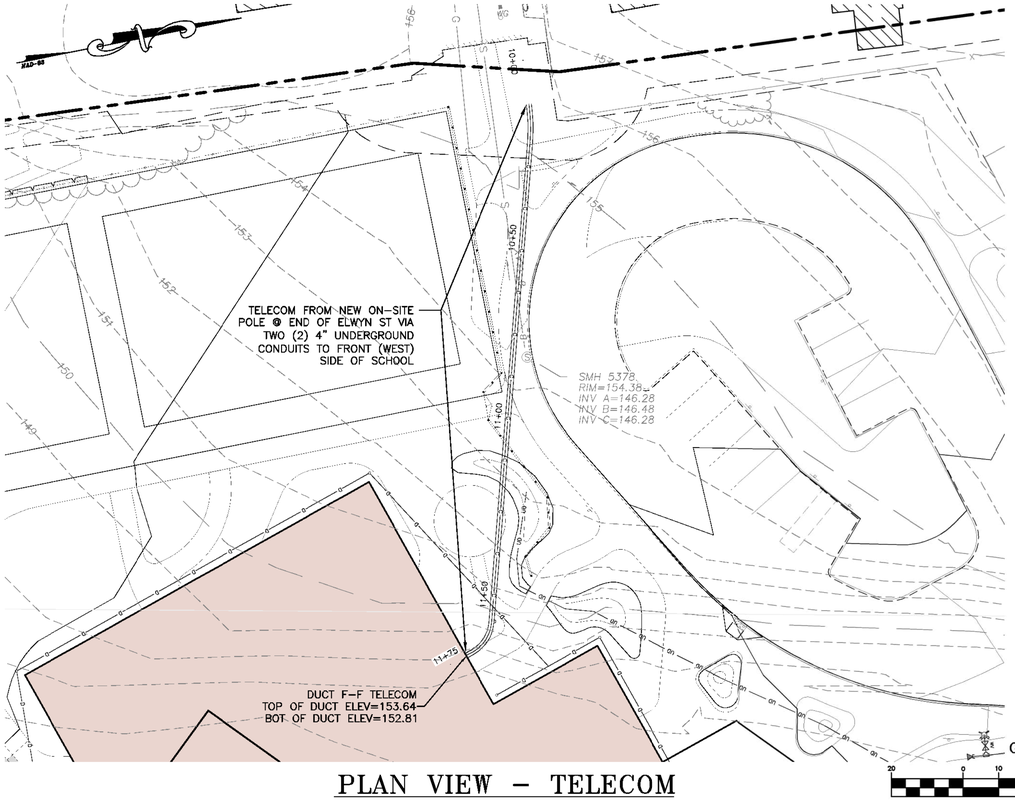
Utility Plan - Gas Service
Detail & Profile View

DRAWING HISTORY:

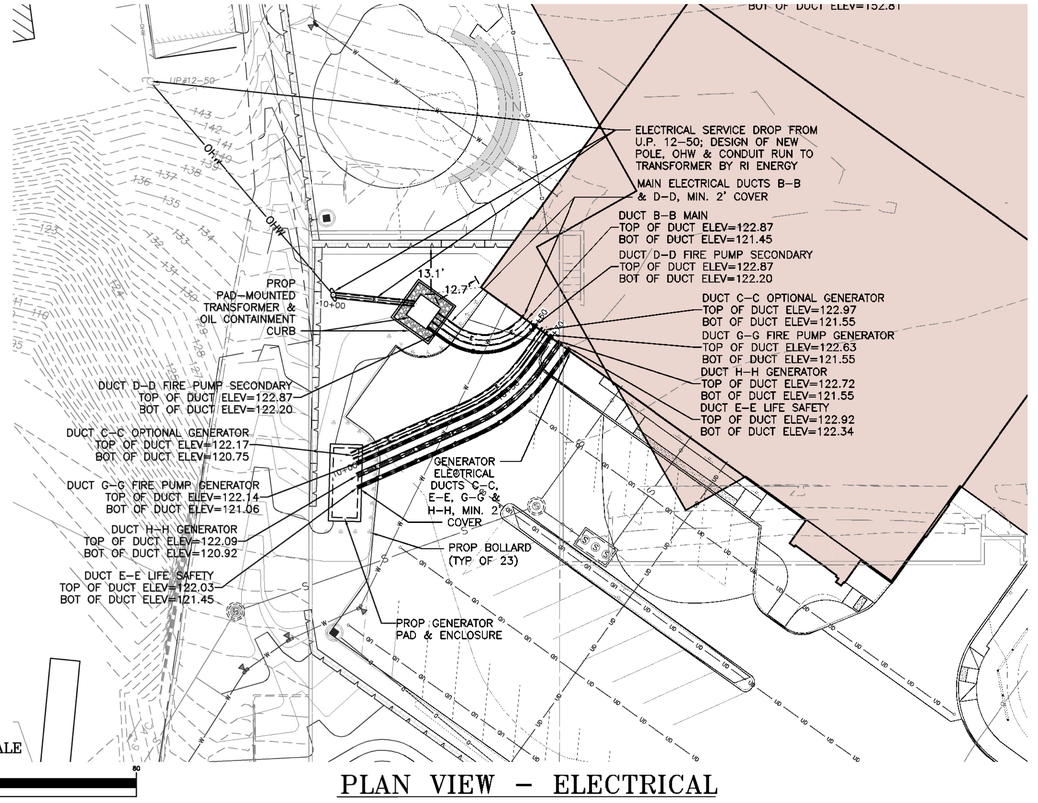
NO.	DATE	DESCRIPTION

SHEET #:

C109



PLAN VIEW – TELECOM

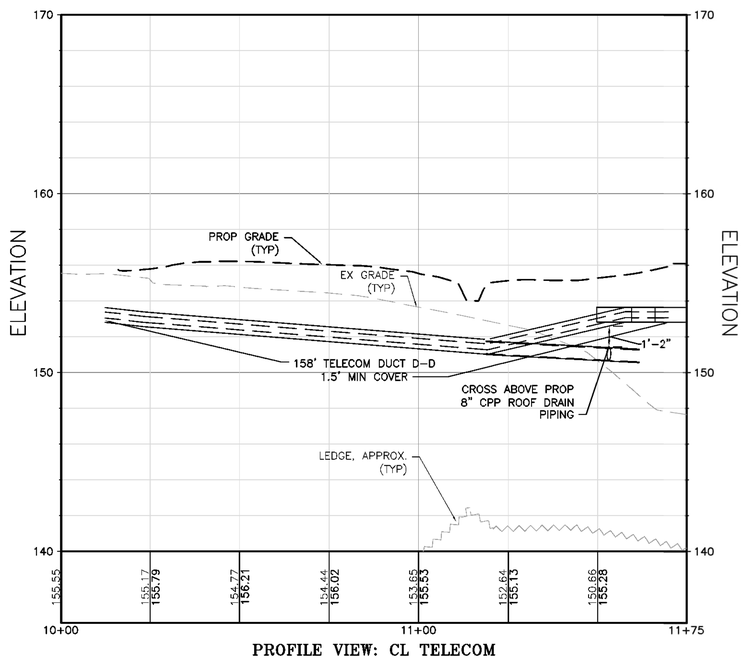


PLAN VIEW – ELECTRICAL

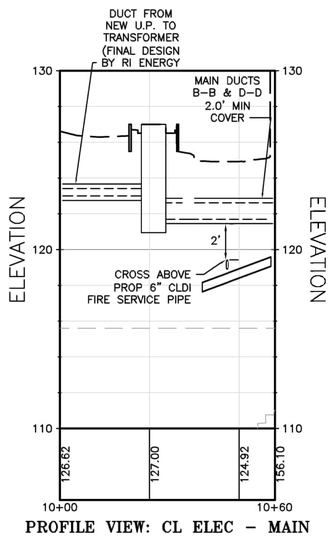
GRAPHIC SCALE

20 0 10 20 40 80

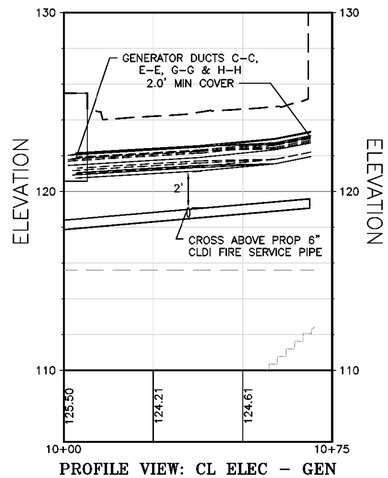
(IN FEET)
1 inch = 20 ft.



PROFILE VIEW: CL TELECOM



PROFILE VIEW: CL ELEC – MAIN



PROFILE VIEW: CL ELEC – GEN

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
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OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

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117 Metro Center Blvd., Suite 1002
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Monroe, CT 06468

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Providence, RI 02909

Landscape Architect
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150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
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CHECKED BY:	TJB

SHEET NAME:

Utility Plan - Electrical & Telecom Services Details & Profile Views

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

C110

GENERAL SOIL EROSION/ SEDIMENTATION CONTROL NOTES:

1. THE RHODE ISLAND SOIL EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION, SHALL BE APPLICABLE TO THIS PROJECT AS APPLICABLE, AND IS MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO.
2. ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE DESIGNATED AUTHORITY (E.G. TOWN ENGINEER, PLANNING BOARD, OTHER DESIGNATED AGENT(S)) TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE CONSTRUCTION/INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL 48-HOUR PRIOR NOTIFICATION IS GIVEN TO THE DESIGNATED AUTHORITY.
3. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED FINAL CONSTRUCTION DRAWINGS AND THE APPLICABLE SPECIFICATIONS.
4. LOCATIONS AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE, AND HAVE BEEN DEPICTED BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES, BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY, AND THE COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR.
5. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY AGENCIES HAVING JURISDICTION OVER THE PROJECT, INCLUDING BUT NOT LIMITED TO FEDERAL, STATE AND LOCAL GOVERNMENTS, QUASI-GOVERNMENTAL ENTITIES, AND ALL INDIVIDUAL UTILITY COMPANIES, PRIOR TO COMMENCING ANY WORK. FURTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY ADHERING TO AND ABIDING BY ANY/ALL REQUIREMENTS OF SAID PERMITS.
6. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-800-344-7233) AS WELL AS ANY/ALL NON-PARTICIPATING UTILITY AGENCIES/OPERATORS A MINIMUM OF 72 WORKING HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK; NO EXCAVATION SHALL BE INITIATED PRIOR TO THE PASSAGE OF THE 72-HOUR NOTIFICATION PERIOD. THE NAME AND DIG-SAFE LICENSE NUMBER OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SOIL EROSION & SEDIMENTATION CONTROLS FOR THE DURATION OF THE WORK (SEE OTHER APPLICABLE NOTES).
8. ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER THAT COULD POLLUTE ANY DOWNSTREAM WATERCOURSE OR RESOURCE AREA.
9. ALL FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS, TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).

SOIL EROSION CONTROL & STABILIZATION PROGRAM:

1. SOIL EROSION CONTROL AND STABILIZATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND PROCEDURES SET FORTH IN THE LOCAL SUBDIVISION/DEVELOPMENT REGULATIONS & ZONING ORDINANCES, THE RI SOIL EROSION & SEDIMENT CONTROL HANDBOOK, AND THE APPROVED SOIL EROSION & SEDIMENTATION CONTROL PLAN (SESCP) FOR THE PROJECT.
2. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL/SOIL STABILIZATION MEASURES, AND SHALL INSPECT/REPLACE THEM AS NEEDED.
3. TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT.
4. NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15 OF ANY CALENDAR YEAR, OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE.
5. ANY AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE DESIGNATED AUTHORITY, BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, AS DIRECTED BY THE DESIGNATED AUTHORITY.
6. IF WORK CONTINUES WITHIN ANY DISTURBED AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE RESTABILIZED WITHIN 5 WORKING DAYS.
7. TEMPORARY STABILIZATION TREATMENTS SHALL CONSIST OF A STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE DESIGNATED AUTHORITY.
8. STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
9. ALL TEMPORARY STABILIZATION SHALL REMAIN IN-PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
10. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
11. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
12. TEMPORARY SEEDING MUST BE DONE WITHIN ONE (1) MONTH AFTER DISTURBANCE.
13. SLOPES CONSTRUCTED AT OR STEEPER THAN 15% SHALL HAVE TEMPORARY EROSION CONTROL MATTING UTILIZED AS A SUPPLEMENTAL MEASURE IN ADDITION TO THE METHODS DESCRIBED ABOVE.
14. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR MORE THAN 2 WEEKS OF TIME OR FOR THE INACTIVE WINTER SEASON.
15. PREPARE TEMPORARY SEEDING AREA, PROVIDE AND PLANT SEED IN ACCORDANCE WITH THE FOLLOWING AND ANY/ALL APPLICABLE STANDARDS:

    TEMPORARY SEED MIX:
    ANNUAL RYE GRASS 1.5 LBS/1,000 SQ. FT.

16. STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS. STOCKPILES SHALL HAVE NO SLOPE GREATER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED HAY BALES, SILT FENCE, OR COMPOST FILTER SOCK. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS OF TIME SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF PLANTING ANNUAL RYE GRASS OR PROTECTING WITH HAY, STRAW OR FIBER MATTING.
17. THE CONTRACTOR SHALL INSPECT SOIL EROSION CONTROL/STABILIZATION MEASURES AFTER EVERY RAIN STORM EVENT GENERATING GREATER THAN 0.25" OF RAINFALL, OR EVERY 7 DAYS (WHICH EVER COMES FIRST). ANY SOIL MIGRATION PAST THE DEVICES SHALL BE REMOVED AND THE SOIL EROSION CONTROL MEASURES SHALL BE RE-ESTABLISHED TO PREVENT FURTHER SOIL EROSION.
18. ANY WORK TO CORRECT PROBLEMS RESULTING FROM FAILURE TO COMPLY WITH THE PRECEDING PROVISIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR; THERE WILL BE NO SEPARATE PAYMENT FOR THIS PROVISION. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 2 WEEKS OF FINAL GRADING.

SEDIMENTATION CONTROL PROGRAM:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING STORMWATER RUNOFF TO, THROUGH AND ACROSS THE SITE DURING CONSTRUCTION. EXTREME CARE SHALL BE EXERCISED TO PREVENT ERODIBLE MATERIALS (SEDIMENTS) WITHIN DISTURBED AREAS OF THE SITE FROM ENTERING STORMWATER DRAINAGE SYSTEMS AND/OR DOWNSTREAM WATERCOURSES/ RESOURCE AREAS DURING CONSTRUCTION.
2. TO THAT PURPOSE, SEDIMENTATION CONTROLS SHALL BE INSTALLED AT/ON THE SITE PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO:
   A) PERIMETER CONTROLS (STAKED STRAW WATTLES/CFS) IN ALL LOCATIONS SHOWN ON THE APPROVED SITE PLANS AND WHERE OTHERWISE NECESSARY TO PREVENT SEDIMENTS FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS;
   B) ANY CATCH BASINS EITHER ON-SITE OR POTENTIALLY IMPACTED BY SITE RUNOFF SHALL BE PROTECTED AS INDICATED/DIRECTED THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE STABILIZED;
   C) GROUND AT ALL DRAINAGE OUTFALLS IS TO BE PROTECTED BY STRAW WATTLE/CFS FILTERS OR APPROVED EQUAL UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER.
3. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL, AND ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
4. AT NO TIME DURING CONSTRUCTION SHALL THE ERODIBLE SUBGRADE OF THE SITE BE SUCH THAT SURFACE RUNOFF WILL BE PERMITTED TO DIRECTLY ENTER ANY DRAINAGE SYSTEM INLET. A TEMPORARY DEPRESSED AREA AROUND THE INLET SHALL BE CREATED AS A SEDIMENTATION TRAP; THE MOUTH OF THE TRAP SHALL BE LINED WITH STRAW WATTLES/CFS AROUND THE COMPLETE PERIMETER OF THE INLET. DURING ALL PRELIMINARY STAGES, THE TOP OF THE INLET STRUCTURE SHALL ALWAYS BE HIGHER THAN THE ADJACENT SUBGRADE SURFACE.
5. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (EITHER TEMPORARY OR PERMANENT) OR PROPOSED WATERCOURSES/FLOW DIVERSIONS OR THOSE AREAS SUBJECTED TO STORMWATER FLOWAGE.
6. CONTRACTOR SHALL INSPECT TEMPORARY WATERCOURSES/FLOW DIVERSIONS AND THEIR COMPONENTS ONCE A WEEK AND AFTER EVERY RAINFALL. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHALL BE REPAIRED BEFORE THE END OF EACH WORKING DAY.
7. CHECK DAMS SHALL BE INSTALLED IN WATERCOURSES/FLOW DIVERSIONS EVERY 300 FEET FOR SLOPES OF 1% OR LESS, EVERY 200 FEET FOR SLOPES OF 2%, EVERY 150 FEET FOR SLOPES OF 3% TO 5%, AND EVERY 100 FEET FOR SLOPES OF 5% OR GREATER. SEDIMENTS SHALL BE REMOVED FROM THE CHECK DAMS WHEN THEY REACH ONE-HALF THE DAM HEIGHT.
8. ADDITIONAL STRAW BALES, CFS OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
9. ALL DISTURBED AREAS ARE TO BE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER PRIOR TO THE COMPLETION OF THE PROJECT. AREAS EXPOSED FOR EXTENDED PERIODS ARE TO BE COMPLETELY COVERED WITH SPREAD HAY MULCH.
10. UPON COMPLETION OF CONSTRUCTION OF SITE IMPROVEMENTS AND THE STORMWATER DRAINAGE SYSTEM (PARTICULARLY ADEQUATE STABILIZATION OF ALL UNPAVED AREAS), ALL STORM DRAIN PIPING AND STRUCTURES (DROP INLETS, DRAIN MANHOLES, CATCH BASINS) SHALL BE CLEANED OF ACCUMULATED SEDIMENTS, WHICH SHALL BE LEGALLY DISPOSED OF AT AN OFF-SITE LOCATION.

SUGGESTED SEQUENCE AND STAGING OF LAND DISTURBING ACTIVITIES:

1. PRIOR TO THE INITIATION OF ANY SITE DISTURBANCE, NOTIFY RIDEM OF THE START OF CONSTRUCTION FOLLOWING CURRENT RIDEM NOTIFICATION PROCEDURE.
2. SURVEY AND STAKE LIMITS OF DISTURBANCE (LOD) FOR PLACEMENT OF SEDIMENTATION CONTROL DEVICES.
3. INSTALL CONSTRUCTION ENTRANCE RIP-RAP STABILIZATION PAD(S).
4. PLACE PERIMETER SEDIMENTATION CONTROL DEVICES (STRAW WATTLES OR COMPOST FILTER SOCKS (CFS)) ALONG LOD. IN NO CASE SHALL WORK BE PERFORMED BEYOND THE ESTABLISHED SEDIMENTATION CONTROL DEVICES/LOD WITHOUT PRIOR AUTHORIZATION FROM THE DESIGNATED AGENT.
5. INSTALL VEGETATION/TREE PROTECTION AS APPLICABLE FOR VEGETATED AREAS/TREES TO BE PRESERVED.
6. SELECTIVELY CLEAR/CLEAR AND GRUB DESIGNATED AREAS OF SITE.
7. BEGIN CONSTRUCTION OF DEVELOPMENT SITE FEATURES (EXCAVATING AND GRADING, ETC.). TOPSOIL AND SUBSOIL TO BE STRIPPED AND STOCKPILED IN DESIGNATED & APPROVED AREAS FOR LATER REUSE; MATERIAL STOCKPILES TO BE PROTECTED AS DEPICTED IN APPLICABLE DETAIL.
8. ROUGH GRADE SWALES/WATERWAYS; INSTALL STRAW WATTLE/CFS CHECK DAM DEVICES TO TRAP SEDIMENT IN ANY ROUGHED-IN CHANNEL(S) THAT WILL TEMPORARILY CONVEY RUNOFF DURING CONSTRUCTION. REFER TO APPLICABLE NOTES THIS SHEET FOR CHECK DAM SPACING.
9. CONSTRUCT NON-STORMWATER UTILITIES (SANITARY SEWER, WATER, GAS, ELECTRIC, ETC.) AND FINISH PROPOSED PAVED SURFACES TO BASE PAVEMENT COURSE.
10. FINISH CONSTRUCTING DRAINAGE SYSTEMS WHEN PERIMETER AREAS ARE STABILIZED SO SEDIMENT CONTAMINATED RUNOFF WILL NOT FLOW INTO COMPLETED DRAINAGE DEVICES; PROTECT DRAINAGE SYSTEMS UNTIL ALL AREAS ARE STABILIZED.
11. PERFORM BUILDING CONSTRUCTION.
12. INSTALL ALL FINAL PAVING/HARDSCAPE SURFACES.
13. LOAM & SEED ALL DISTURBED AREAS NOT TO BE PAVED/HARDSCAPED.
14. REMOVE ALL ACCUMULATED SEDIMENTS IN DRAINAGE SYSTEMS, AND REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER A PERMANENT GROWTH OF VEGETATION IS ESTABLISHED.

SEEDING/PLANTING:

1. ALL DISTURBED AREAS MUST BE SEEDED OR PLANTED (WHETHER TEMPORARILY OR PERMANENTLY) WITHIN THE CONSTRUCTION SEASON; THE TYPICAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
2. TOPSOIL IN SEEDED AREAS SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS.
3. THE SEED MIX SHALL BE INOCULATED WITHIN 24-HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
4. THE DESIGN MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT	SEEDING DATE
CREEPING RED FESCUE	70	APRIL 1 – JUNE 15
ASTORIA BENTGRASS	5	AUGUST 15 – OCT.
BIRDFOOT TREEFOIL	15	
PERENNIAL RYEGRASS	10	

APPLICATION RATE 100 LBS/ACRE

LIMING AND FERTILIZING AS REQUIRED TO COMPLEMENT OR UPGRADE EXISTING CONDITIONS.

5. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
6. ALL PROPOSED PLANTINGS MUST BE ACCOMPLISHED AS EARLY AS POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION, AND AT LEAST PRIOR TO ANY ON-SITE OCCUPANCY.
7. ALL PROPOSED PLANTINGS MUST BE MAINTAINED BY THE CONTRACTOR TO ENSURE SURVIVAL DURING THE FULL WARRANTY PERIOD. SHOULD ANY OR ALL OF THE PROPOSED PLANTS FAIL TO SURVIVE AT LEAST ONE (1) FULL GROWING SEASON FROM THE TIME THEY HAVE BEEN PLANTED, THE CONTRACTOR SHALL BE SOLELY AND FULLY RESPONSIBLE FOR REPLACING AND MAINTAINING THE SAME PLANT SPECIES FOR ONE (1) ADDITIONAL GROWING SEASON.

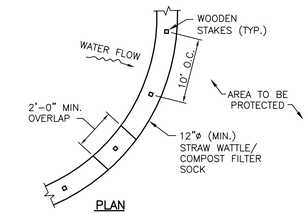
STORMWATER INFILTRATION PRACTICES:

1. STORMWATER INFILTRATION MEASURES ARE HEAVILY RELIANT ON THE INFILTRATION CAPACITY OF THE UNDERLYING IN-SITU SOILS FOR THEIR PROPER FUNCTION AND LONGEVITY. OVER-COMPACTION OF UNDERLYING SOILS WILL COMPROMISE THE EFFECTIVENESS OF SUCH PRACTICES.
2. THE CONTRACTOR SHALL TAKE ALL DUE CARE TO PREVENT OVER-COMPACTION OF UNDERLYING SOILS IN AREAS OF PROPOSED STORMWATER INFILTRATION MEASURES, BY MARKING OFF THE LOCATION BEFORE THE START OF CONSTRUCTION AND CONSTRUCTING THE INFILTRATION PRACTICE LAST, CONNECTING UPSTREAM DRAINAGE AREAS ONLY AFTER CONSTRUCTION IS COMPLETE AND THE CONTRIBUTING AREA IS STABILIZED.
3. INFILTRATION PRACTICES SHALL NEVER SERVE AS SEDIMENT CONTROL DEVICES DURING THE SITE CONSTRUCTION PHASE. THE CONTRACTOR SHALL SUBMIT A PLAN TO THE DESIGNATED AUTHORITY (FOR APPROVAL) INDICATING HOW SEDIMENT WILL BE PREVENTED FROM ENTERING THE AREA OF AN INFILTRATION FACILITY.
4. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED DOWN TO NATIVE UNDISTURBED MATERIAL PRIOR TO CONSTRUCTING THE FINAL INFILTRATION PRACTICES.
5. IF NECESSARY OR DIRECTED, THE CONTRACTOR SHALL RESTORE THE INFILTRATION CAPACITY OF ALL COMPACTED IN-SITU SOILS BENEATH INFILTRATION MEASURES BY TILLING OR SCARIFYING COMPACTED SOILS TO A MINIMUM DEPTH OF 18" BENEATH THE BOTTOM OF THE PROPOSED INFILTRATION MEASURE.
6. THE DESIGNATED AUTHORITY MAY REQUIRE THE CONTRACTOR TO PERFORM, AT ITS SOLE EXPENSE, INFILTROMETER TESTING OF THE IN-SITU SUBGRADE SOILS PRIOR TO INSTALLATION OF THE INFILTRATION PRACTICE TO DEMONSTRATE THAT THE NECESSARY SOIL INFILTRATION CAPACITY WILL BE PROVIDED BY THE UNDERLYING SOILS.

LONG-TERM POLLUTION PREVENTION NOTES:

SITE OWNER/OPERATOR SHALL REFER TO AND FOLLOW THE APPROVED OPERATION & MAINTENANCE (O&M) PLAN PREPARED FOR THIS PROJECT. A BRIEF SUMMARY OF LONG-TERM POLLUTION PREVENTION TECHNIQUES THAT MAY BE APPLIED TO THE PROJECT (AS APPROPRIATE) IS PROVIDED BELOW:

1. SOLID WASTE CONTAINMENT:
   A. OWNER TO PROVIDE TRASH CONTAINER. CONTAINER TO HAVE A COVER TO PREVENT TRASH FROM BLOWING OUT.
   B. SWEEP COMMON DRIVEWAY ANNUALLY.
2. HAZARDOUS MATERIALS CONTAINMENT:
   A. STORE ALL HAZARDOUS MATERIALS INSIDE STORAGE LOCKERS OR OTHER APPROVED METHODS WHICH HAVE SECONDARY CONTAINMENT SYSTEMS.
   B. SECONDARY CONTAINMENT MUST BE INCLUDED WHEREVER SPILLS MIGHT OCCUR (E.G. FUELING AND HAZARDOUS MATERIAL TRANSFER AND LOADING AREAS).
3. ROADS AND PARKING AREA MANAGEMENT:
   A. SWEEP COMMON DRIVEWAY AREA ANNUALLY.
   B. USE DEICING CHEMICALS AND SAND JUDICIOUSLY, AS THEY HAVE THE POTENTIAL TO CAUSE WATER QUALITY PROBLEMS. PROVIDE AND SPREAD IN ACCORDANCE WITH O&M RECOMMENDATIONS.
      * PLOW SNOW AND STORE ACCUMULATED SNOW PILES AWAY FROM INFILTRATION PRACTICES. KEEP SNOW PILES 50 FEET FROM WETLAND EDGE AND AREA SUBJECT TO STORM FLOW.
      * DEBRIS SHOULD BE CLEANED FROM THE SITE PRIOR USING THE SITE FOR SNOW DISPOSAL.
      * DEBRIS SHOULD BE CLEARED FROM THE SITE AND PROPERLY DISPOSED OF AT THE END OF THE SNOW SEASON.
   D. ONLY USE ASPHALT BASED SEALANTS WHEN SEALING THE PAVEMENTS. DO NOT USE COAL-TAR BASED SEALANTS, AS THESE ARE MORE TOXIC.
4. LAWN, GARDEN, AND LANDSCAPE MANAGEMENT:
   A. LAWN CONVERSION – REDUCE THE AMOUNT OF LAWN BY REPLANTING LAWN WITH GARDEN BEDS CONTAINING FLOWERS/SHRUBS. LAWNS REQUIRE MORE MAINTENANCE THAN FLOWER BEDS.
   B. SOIL BUILDING – MAINTAIN A HEALTHY LAWN BY TESTING SOIL FOR pH, FERTILITY, COMPACTION, TEXTURE, AND EARTHWORM CONTENT.
   C. GRASS SELECTION – SELECT DROUGHT TOLERANT GRASS SPECIES.
   D. MOWING AND THATCH MANAGEMENT – MAINTAIN GRASS AT MINIMUM 3 TO 4 INCHES IN HEIGHT. THIS WILL REDUCE WEED GROWTH.
   E. FERTILIZATION – MINIMIZE FERTILIZATION. FERTILIZE NO MORE THAN TWICE A YEAR. APPLY CAREFULLY SO FERTILIZER DOES NOT SPREAD ONTO IMPERVIOUS SURFACES.
   F. WEED MANAGEMENT – NEVER USE CHEMICAL HERBICIDES TO ELIMINATE OR CONTROL WEEDS. OWNER SHALL REMOVE WEEDS BY PULLING OR DIGGING OUT.
   G. PEST MANAGEMENT – LIMIT PESTICIDE USE. CHOOSE PESTICIDES THAT POSE THE LEAST RISK TO HUMAN HEALTH AND THE ENVIRONMENT.
   H. SENSIBLE IRRIGATION – WATER NO MORE THAN 1" PER WEEK. USE DROUGHT-RESISTANT GRASSES. CUT GRASS AT 3-4 INCHES.

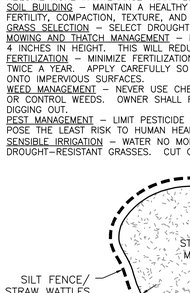


NOTES:
1. ALL MATERIAL TO MEET REQUIREMENTS OF SECTION 206 OF RI STANDARD SPECIFICATIONS.
2. SUBMIT SHOP DRAWING OF COMPOST MATERIAL FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
3. COMPOST FILTER SOCK IS AN APPROVED "OR EQUAL" TO COMPOST FILTER BERM WHEN INSTALLED IN ACCORDANCE WITH THE TABLE BELOW:

   MAXIMUM LENGTH ABOVE COMPOST FILTER SOCK (FEET) AND CORRESPONDING DIAMETER OF SOCK REQUIRED:

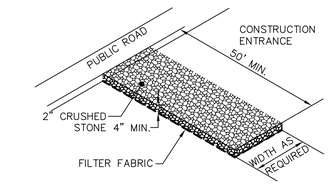
UPGRADIENT SLOPE	8"ø	12"ø	18"ø	24"ø
2%	300'	375'	500'	650'
5%	200'	250'	275'	325'
10%	100'	125'	150'	200'
20%	50'	65'	70'	130'
30%	30'	40'	45'	85'
40%	30'	40'	45'	50'
50%	20'	25'	30'	35'

STRAW WATTLE/COMPOST FILTER SOCK
NOT TO SCALE



NOTE: SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION				
REVISIONS NO.	BY	DATE	TREE PROTECTION DEVICE	R.I. STANDARD 51.1.0
			CHIEF ENGINEER, TRANSPORTATION — CHIEF DESIGN ENGINEER, TRANSPORTATION — JUNE 15, 1998 ISSUE DATE	

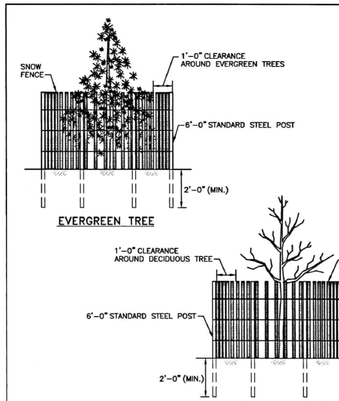


MATERIALS SIZE

SQUARE MESH SIEVES	2"CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	–	–
1 INCH	0-5	–	0-15
3/4 INCH	–	0-5	–
1/2 INCH	–	–	0-5
3/8 INCH	–	–	–

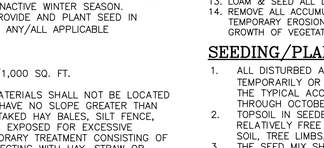
NOTE:
STABILIZATION PAD TO BE IN COMFORMANCE WITH STANDARDS SET FORTH IN THE "RHODE ISLAND GUIDELINES FOR SOIL & SEDIMENT CONTROL."

RIP-RAP STABILIZATION PAD @ CONSTRUCTION ENTRANCE
NOT TO SCALE

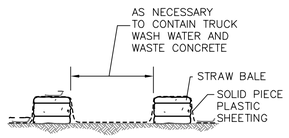


NOTE: SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

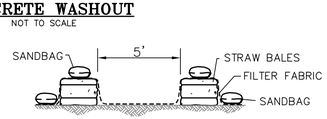
RHODE ISLAND DEPARTMENT OF TRANSPORTATION				
REVISIONS NO.	BY	DATE	DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES	R.I. STANDARD 51.1.1
			CHIEF ENGINEER, TRANSPORTATION — CHIEF DESIGN ENGINEER, TRANSPORTATION — JUNE 15, 1998 ISSUE DATE	

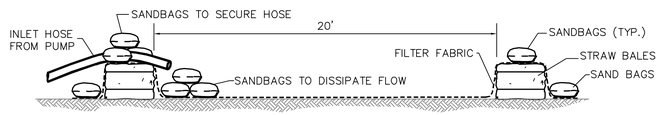


MATERIAL STOCKPILE DETAIL
NOT TO SCALE

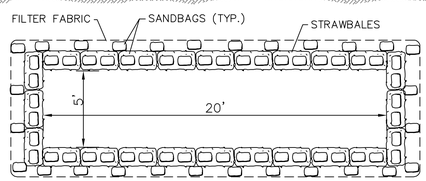


CONCRETE WASHOUT
NOT TO SCALE





NOTES:
1. LOCATE SEDIMENT TRAP WHERE FLOW CAN DISSIPATE THROUGH FILTER FABRIC AND STRAWBALES.
2. SEDIMENT TRAP LENGTH SHOULD BE FOUR TIMES ITS WIDTH.
3. USE SAND BAGS AS NEED TO HOLD/SECURE FILTER FABRIC.
4. ALL COLLECTED SEDIMENT IS TO BE DISPOSED OF PROPERLY PER ANY APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS.
5. DEWATERING BASINS MUST BE LOCATED WITHIN THE PROPOSED LIMITS OF DISTURBANCE.



DEWATERING BASIN & SEDIMENT TRAP
NOT TO SCALE

DRAWING ISSUE:
- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN — No. 6278 — REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

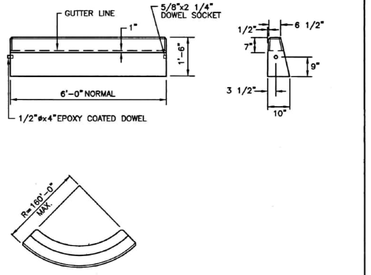
Civil Details 1

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

CD101



CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

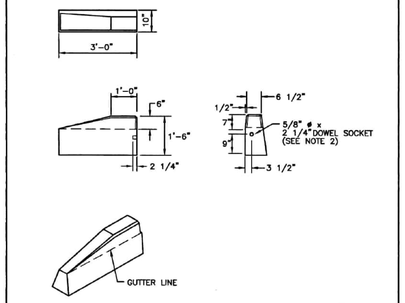
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE CURB

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.1.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4"CHAMFER.

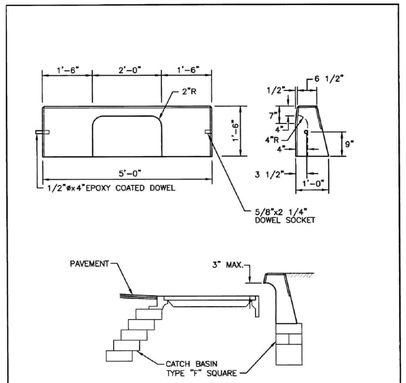
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

3'-0" PRECAST CONCRETE TRANSITION CURB

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.1.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

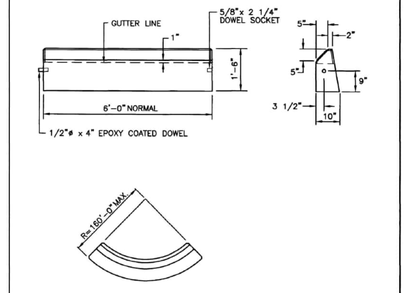
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.1.7



CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

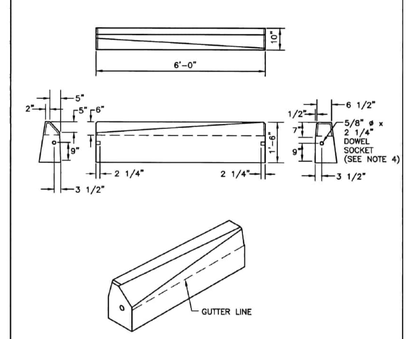
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE SLOPED FACE CURB

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.2.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4"CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ø x 4" EPOXY COATED DOWEL.

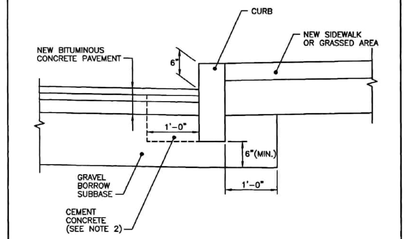
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.2.2



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

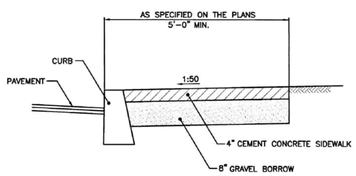
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

CURB SETTING DETAIL

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 7.6.0



NOTES
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

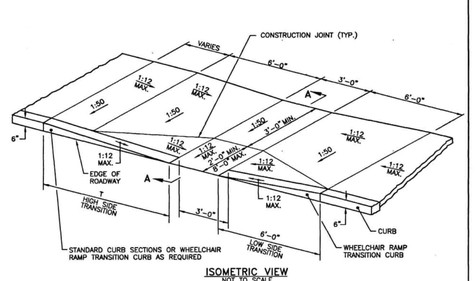
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

CEMENT CONCRETE SIDEWALK

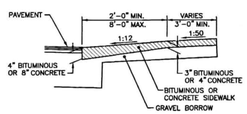
JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 43.1.0



ISOMETRIC VIEW
NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK AREA, A CROSSWALK AREA, AND IT IS TO BE CENTERED WHENEVER POSSIBLE, THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'–0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.

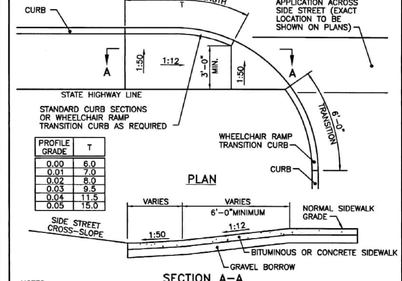
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

WHEELCHAIR RAMP

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 43.3.0



PROFILE GRADE	T
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT–OF–WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0"(GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'–0" SHALL BE MAINTAINED.

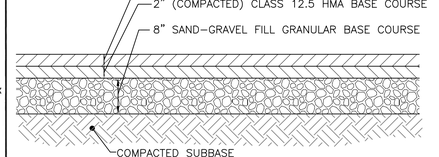
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

WHEELCHAIR RAMP FOR LIMITED RIGHT–OF–WAY AREAS

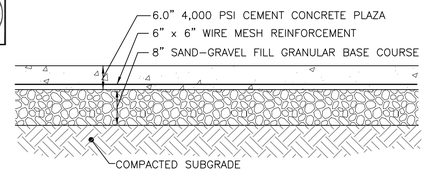
JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 43.3.1



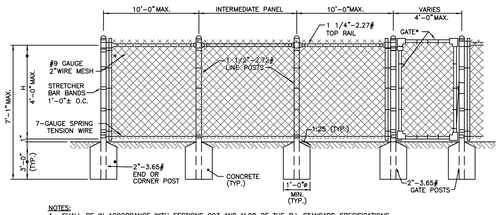
SITE DRIVEWAY & PARKING AREA TYPICAL PAVEMENT SECTION

NOT TO SCALE



REINFORCED CEMENT CONCRETE PLAZA TYPICAL SECTION

NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTIONS 903 AND M.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.
3. SCHOOL FENCE: SHALL BE BLACK VINYL–COATED.
4. BASEBALL FIELD FENCE: SHALL BE GALVANIZED IN CONFORMANCE WITH AASHTO M111.
5. *THE PROJECT CALLS FOR SPECIALIZED FENCE GATES; REFER TO ARCHITECTURAL DOOR SCHEDULE FOR DETAILS. THE GATE DEPICTED HEREON IS TO ILLUSTRATE THE LOCATION OF THE GATE RELATIVE TO THE FENCE SECTIONS.

4'H CHAIN LINK FENCE DETAIL

NOT TO SCALE

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS–BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN — No. 6278 — REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

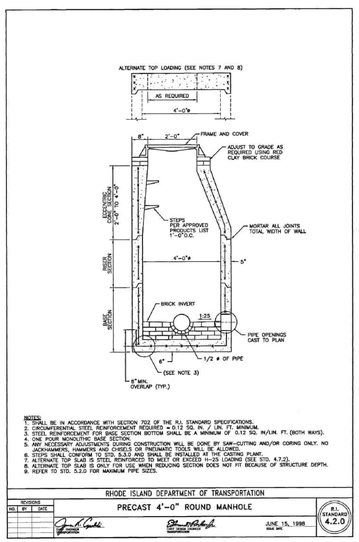
Civil Details 2

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

CD102



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

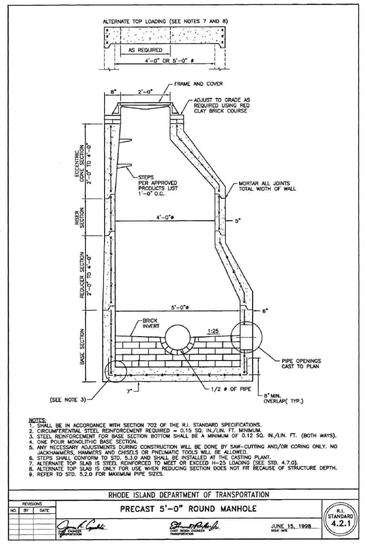
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 4'-0" ROUND MANHOLE

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.2.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
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8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

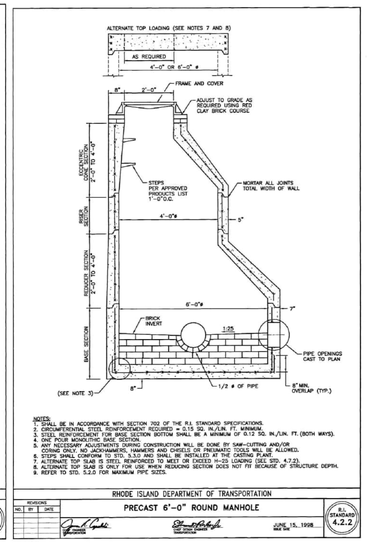
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 5'-0" ROUND MANHOLE

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.2.1



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST 6'-0" ROUND MANHOLE

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.2.2

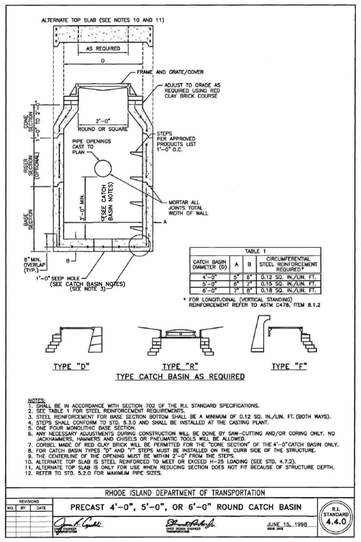


TABLE 1

CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT *
3'-0"	9"	3"	0.15 SQ. IN./LIN. FT.
4'-0"	9"	3"	0.15 SQ. IN./LIN. FT.
5'-0"	9"	3"	0.15 SQ. IN./LIN. FT.
6'-0"	9"	3"	0.15 SQ. IN./LIN. FT.

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

TYPE CATCH BASIN AS REQUIRED

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 8.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0"CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

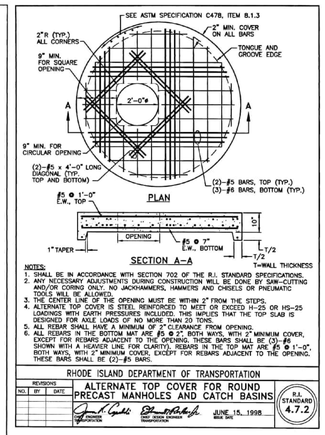
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

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

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.4.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTER LINE OF THE OPENING MUST BE WITHIN 3" FROM THE STEPS.
4. ALTERNATE TOP COVER IS STEEL REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBAR SHALL HAVE A MINIMUM OF 2" CLEARANCE FROM OPENING.
6. ALL REBARS IN THE BOTTOM MAT ARE TO BE 2", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THE TOP REINFORCEMENT SHALL BE (3)-#5 BARS SHOWN WITH A HEADER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.

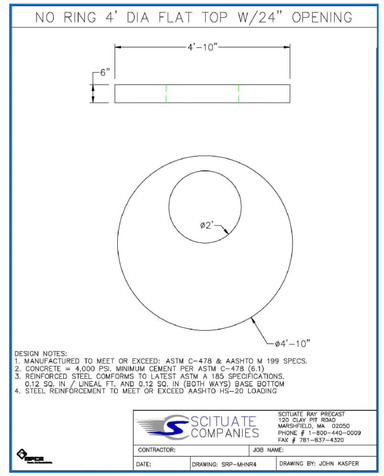
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.7.2



DESIGN NOTES:
1. MANUFACTURED TO MEET OR EXCEED: ASTM C-478 & AASHTO M 199 SPECS.
2. CONCRETE = 4,000 PSI. MINIMUM CEMENT PER ASTM C-478 (6.1)
3. REINFORCED STEEL CONFORMS TO LATEST ASTM A 185 SPECIFICATIONS. 0.12 SQ. IN. / LINEAL FT. AND 0.12 SQ. IN (BOTH WAYS) BASE BOTTOM
4. STEEL REINFORCEMENT TO MEET OR EXCEED AASHTO HS-20 LOADING

SCITUATE COMPANIES
SCITUATE RAY PRECAST
120 CLAY PIT ROAD
MARSHFIELD, MA. 02050
PHONE # 1-800-442-0009
FAX # 781-837-4320

CONTRACTOR: | JOB NAME:

DATE: | DRAWING: SRP-MHN4 | DRAWING BY: JOHN KASPER

GENERAL NOTES:

1. SHALL BE USED ON PROPOSED DRAINAGE STRUCTURES WHERE RIDOT STD. SLAB TOPS (4.7.2) WILL NOT PROVIDE ADEQUATE CLEARANCE TO THE TOPS OF ALL PROPOSED PIPES ENTERING/EXITING THE STRUCTURE.
2. WHEN THIS SLAB TOP IS USED, THE CASTING OF THE UNDERLYING STRUCTURES SHALL NOT INCLUDE LIPS AROUND THE TOPS OF THE BASE/RISER SECTION, AND THE NO-RING SLAB TOP SHALL BE SECURELY MORTARED IN-PLACE TO THE TOP OF THE STRUCTURE AROUND THE ENTIRE PERIMETER OF THE TOP.
3. CONTRACTOR MAY PROPOSE ALTERNATE FABRICATOR(S), IN WHICH CASE A SHOP DRAWING FROM THE FABRICATOR FOR THE SHALL BE PROVIDED FOR REVIEW & APPROVAL.

CATCH BASIN NOTES (APPLICABLE TO RI STD. 4.4.0):

1) ALL CATCH BASINS SHALL HAVE FOUR (4) FOOT DEEP SUMPS, RATHER THAN RIDOT STD. THREE (3) FOOT DEEP SUMPS.
2) SEEP HOLES SHALL NOT BE PROVIDED IN ANY CATCH BASIN SUMPS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE DROP INLET

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.5.0

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

PRECAST CONCRETE DROP INLET LATERAL OUTLET

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.5.1

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

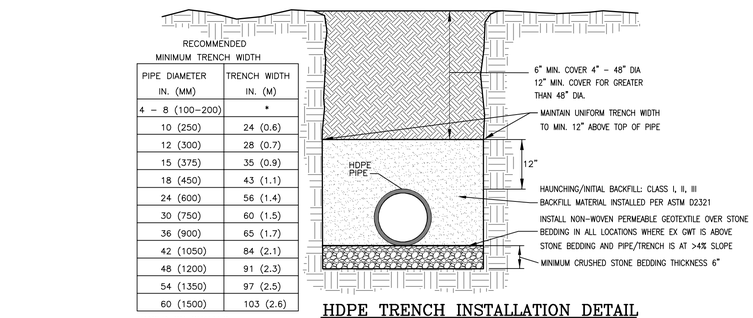
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS NO.	BY	DATE

SQUARE FRAME AND GRATE

CHIEF ENGINEER / DEPUTY DIRECTOR | CHIEF DESIGN ENGINEER TRANSPORTATION | JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 6.3.0

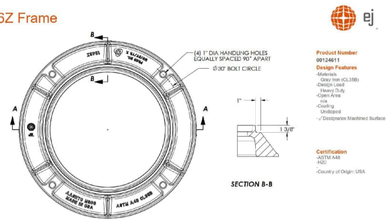


PIPE DIAMETER IN. (MM)	TRENCH WIDTH IN. (M)
4 - 8 (100-200)	*
10 (250)	24 (0.6)
12 (300)	28 (0.7)
15 (375)	35 (0.9)
18 (450)	43 (1.1)
24 (600)	56 (1.4)
30 (750)	60 (1.5)
36 (900)	65 (1.7)
42 (1050)	84 (2.1)
48 (1200)	91 (2.3)
54 (1350)	97 (2.5)
60 (1500)	103 (2.6)

*BASED ON SMALLEST AVAILABLE BUCKET SIZE

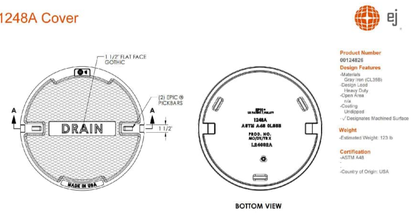
HDPE TRENCH INSTALLATION DETAIL
(HANCOR DETAIL FOR TRENCH)
NOT TO SCALE

1246Z Frame



Product Number
69124611
Design Features
-Materials
Gray Iron (CL35B)
-Design Load
Heavy Duty
-Certifications
Unit
-Coating
Unpolished
-√ Designates Machined Surface
Certification
-ASTM A48
H20
-Country of Origin: USA
Drawing Revision
6/3/2008 Designer: JU
6/1/2020 Revised By: DAE
Disclaimer
Contact
800.536.4633
ejco.com

1248A Cover



Product Number
69124626
Design Features
-Materials
Gray Iron (CL35B)
-Design Load
Heavy Duty
-Certifications
Unit
-Coating
Unpolished
-√ Designates Machined Surface
Weight
-Estimated Weight: 123 lb
Certification
-ASTM A48
-Country of Origin: USA
Drawing Revision
3/17/2009 Designer: JU
7/25/2017 Revised By: EBN
Disclaimer
Contact
800.535.4653
ejco.com

ALTERNATE(S) NOTE:

1. CONTRACTOR MAY PROPOSE ALTERNATE FABRICATOR(S), IN WHICH CASE A SHOP DRAWING FROM THE FABRICATOR FOR THE SHALL BE PROVIDED FOR REVIEW & APPROVAL.

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS-BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

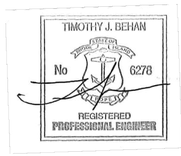
Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:



PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

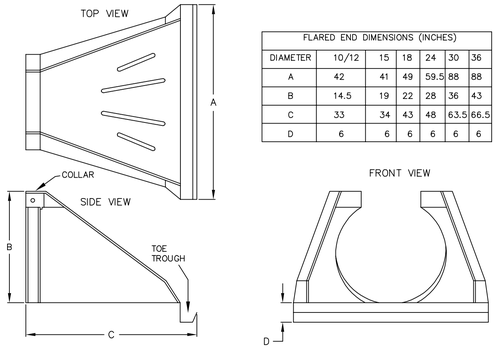
Civil Details 3

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

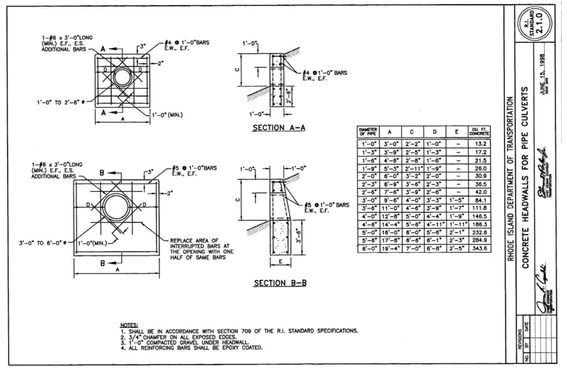
SHEET #:

CD103

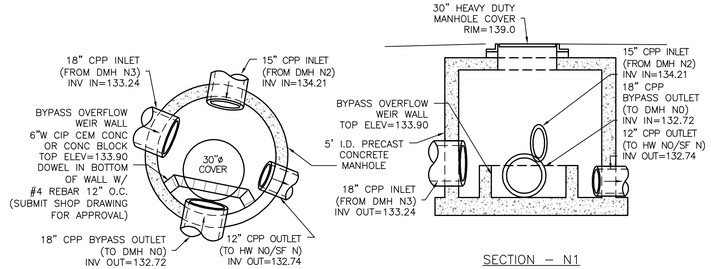


FLARED END DIMENSIONS (INCHES)						
DIAMETER	10/12	15	18	24	30	36
A	42	41	49	59.5	88	88
B	14.5	19	22	28	36	43
C	33	34	43	48	63.5	66.5
D	6	6	6	6	6	6

HDPE PIPE FLARED END SECTION DETAIL
NOT TO SCALE



DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'–0"	3'–0"	2'–2"	1'–0"	–	13.2
1'–3"	3'–9"	2'–5"	1'–3"	–	17.2
1'–6"	4'–0"	2'–8"	1'–6"	–	21.5
1'–9"	4'–3"	2'–11"	1'–9"	–	26.0
2'–0"	4'–6"	3'–2"	2'–0"	–	30.9
2'–3"	4'–9"	3'–6"	2'–3"	–	36.5
2'–6"	5'–0"	3'–9"	2'–6"	–	42.0
3'–0"	5'–6"	4'–0"	2'–3"	1'–5"	84.1
3'–6"	11'–0"	4'–6"	2'–9"	1'–3"	111.8
4'–0"	12'–8"	5'–0"	4'–4"	1'–9"	146.5
4'–6"	14'–4"	5'–6"	4'–11"	1'–11"	186.3
5'–0"	16'–0"	6'–0"	5'–6"	2'–1"	232.6
5'–6"	17'–8"	6'–6"	6'–1"	2'–3"	284.9
6'–0"	19'–4"	7'–0"	6'–8"	2'–5"	343.5

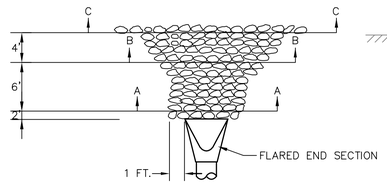


PLAN – N1

SECTION – N1

NOTES:
1. PRECAST CONCRETE MANHOLE MANUFACTURER SHALL SUBMIT SHOP DRAWING OF EACH STRUCTURE FOR REVIEW AND APPROVAL.
2. LOCATE WEIR WALL AND MANHOLE OPENINGS TO PROVIDE ACCESS TO ALL PIPE PENETRATIONS FOR MAINTENANCE AND ABILITY FOR CLEAN–OUT.

STORMWATER DIVERSION MANHOLE N1
NOT TO SCALE

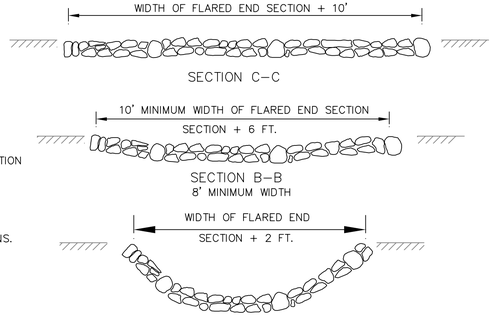


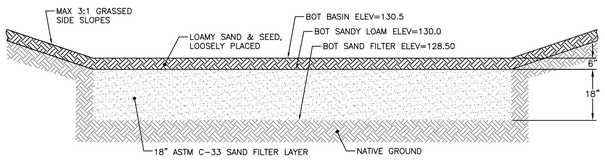
NOTES:
1. CLASS OF RIP–RAP AND BEDDING TO BE SPECIFIED IN CONTRACT DOCUMENTS.
2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.
3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP–RAP SHALL BE USED.

RIP–RAP TABLE

STONE	BEDDING
STONE / DEPTH	SIZE / DEPTH
M02.02.4 / 12"	1"STONE / 4"
M02.02.4 = 8" – 95 / 100%,	
4" – 0 / 25%	
2½" – 0 / 5%	

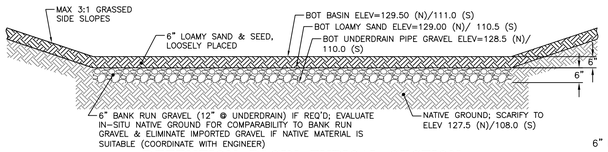
ROCK FILL RIP–RAP @ FLARED END SECTIONS
NOT TO SCALE



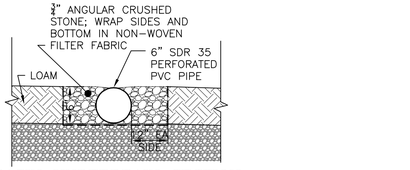


SAND FILTER BASIN TYPICAL SECTION
NOT TO SCALE

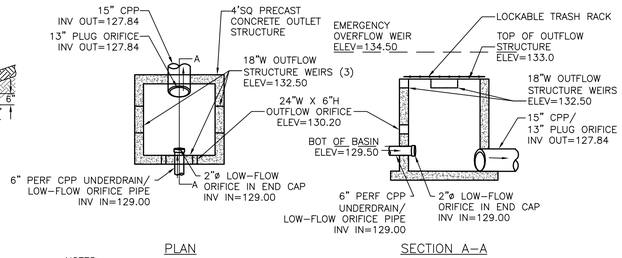
NOTE:
SURFACE BENEATH BOTTOM OF SAND FILTER TO BE NATIVE GROUND, OR REMOVE ALL NON–NATIVE MATERIAL DOWN TO NATIVE GROUND AND FILL TO BOTTOM OF SAND FILTER WITH SEPTIC GRAVEL.



DETENTION BASIN TYPICAL SECTION
NOT TO SCALE



BASIN UNDERDRAIN SECTION
NOT TO SCALE

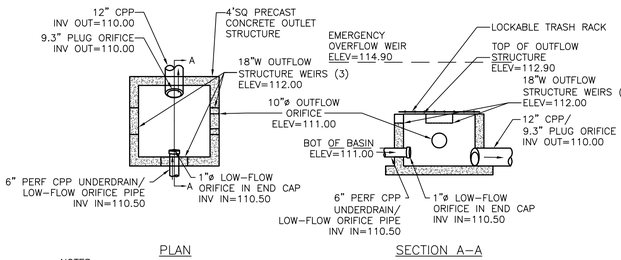


PLAN

SECTION A–A

NOTES:
1. PRECAST CONCRETE STRUCTURE MANUFACTURER SHALL SUBMIT SHOP DRAWING OF STRUCTURE FOR REVIEW AND APPROVAL.

DETENTION BASIN NORTH OUTFLOW STRUCTURE
NOT TO SCALE

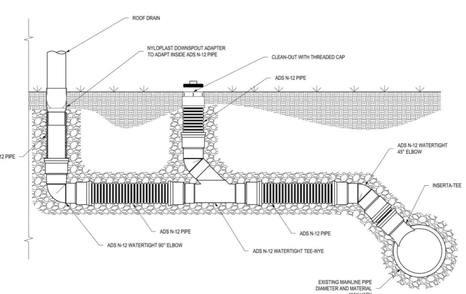


PLAN

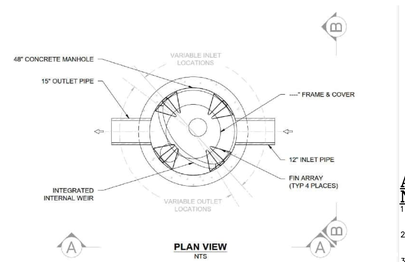
SECTION A–A

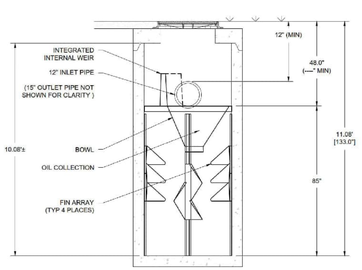
NOTES:
1. PRECAST CONCRETE STRUCTURE MANUFACTURER SHALL SUBMIT SHOP DRAWING OF STRUCTURE FOR REVIEW AND APPROVAL.

DETENTION BASIN SOUTH OUTFLOW STRUCTURE
NOT TO SCALE



ROOF DOWNSPOUT ADAPTER DETAIL
NOT TO SCALE





ADS "BARRACUDA" MODEL S4 HYDRODYNAMIC STORMWATER SEPARATOR
NOT TO SCALE

ADS BARRACUDA S4 WATER QUALITY UNIT DETAILS NOTE:
1. THIS IS A GENERIC DETAIL FOR THE BARRACUDA MODEL S4 HYDRODYNAMIC SEPARATOR MANHOLE. IT IS NOT INTENDED TO PROVIDE DETAILED PROJECT–SPECIFIC INFORMATION FOR THE BARRACUDA S4 UNITS PROPOSED FOR THIS PROJECT.
2. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ADS, INC. TO DEVELOP INDIVIDUAL SHOP DRAWINGS FOR EACH PROPOSED S4 UNIT, WHICH SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL.
3. ALTERNATE HYDRODYNAMIC SEPARATION UNIT(S) MAY BE PROPOSED; ALTERNATE UNIT(S) MUST MEET OR EXCEED THE PERFORMANCE SPECIFICATIONS OF THE BARRACUDA S4 TO BE CONSIDERED. THE OWNER SHALL BE THE SOLE JUDGE OF WHETHER AN ALTERNATE UNIT IS ACCEPTABLE AND MAY BE SUBSTITUTED FOR THE BARRACUDA S4.

DRAWING ISSUE:
- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS–BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Civil Details 4

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

CD104

WATER SYSTEM NOTES:

1. CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROVIDENCE WATER SUPPLY BOARD (PWSB) AND ANY APPLICABLE CITY OF CRANSTON RULES, REGULATIONS, AND INSTALLATION REQUIREMENTS. WHERE THERE IS A CONFLICT BETWEEN THE TWO, THE PWSB RULES SHALL GOVERN.

2. CONSTRUCTION MATERIALS AND METHODS FOR WATER MAIN & SERVICE CONNECTIONS HAVE BEEN STANDARDIZED. THE CONTRACTOR SHALL ONLY USE APPROVED MATERIALS AND METHODS. APPROVED MATERIALS AND METHODS CHANGE FROM TIME TO TIME, AND MAY SUPERSEDE THE NOTES BELOW. THE CONTRACTOR SHALL CONFIRM ALL MATERIAL AND INSTALLATION REQUIREMENTS PRIOR TO BIDDING AND CONSTRUCTION.

3. PIPELINE MAINS: WATER PIPE, OF THE PUSH–ON OR MECHANICAL JOINT TYPE, SHALL BE MANUFACTURED OF DUCTILE IRON AND SHALL BE CLASS 52. DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA C151/A21.51, ANSI/AWWA C150/A21.50 CLASS 52 DOUBLE CEMENT MORTAR LINED. GASKETS SHALL CONFORM TO ANSI/AWWA C111/A21.1. ALL PIPES SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL PIPES SHALL BE CEMENT–MORTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14, EXCEPT THAT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR PIPE SHALL BE PUSH–ON (TYTON STYLE) OR MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT PIPES SHALL BE SUPPLIED WITH ACCESSORIES. RESTRAINED JOINTS SHALL BE SUITABLE FOR 150 PSI WORKING PRESSURE AND FABRICATED OF HEAVY SECTION DUCTILE IRON CASTING. GASKETS SHALL MEET THE MATERIAL REQUIREMENTS OF ANSI/AWWA AND MADE IN THE USA.

TYPE:	DUCTILE IRON MEETING ANSI/AWWA C151/A21.51 ANSI/AWWA C150/A21.50.
CLASS:	SPECIAL THICKNESS CLASS 52.
LINING:	DOUBLE CEMENT MORTAR MEETING ANSI/AWWA C151/A21.5.
END JOINTS:	PUSH ON – TYTON STYLE – MEETING ANSI/AWWA C111/A21.51.
MECHANICAL JOINT:	MEETING ANSI/AWWA C111/A21.11, 1 MIL THICK.
COATING EXTERIOR:	ANSI/AWWA C104/A21.4.
COATING INTERIOR:	ALL REQUIREMENTS OF EPA FOR POTABLE WATER.
GASKET:	RUBBER MEETING ANSI/AWWA C111/A21.11. NITRILE (IN CONTAMINATED SOIL).

4. DUCTILE IRON FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT, CLASS 350 (4"–24") AND CLASS 250 (30"–48") , CEMENT MORTAR LINED AND PROVIDED WITH AN ASPHALTIC COATING 1 MIL THICK ON THE EXTERIOR. DUCTILE IRON COMPACT FITTINGS, CLASS 350, MAY BE USED IN THE 4 TO 16–INCH SIZE. COMPONENTS SHALL CONFORM WITH THE WEIGHTS, EXCLUDING ACCESSORIES, AND DIMENSIONS SHOWN IN CURRENT AWWA STANDARDS. FITTINGS SHALL CONFORM TO ANSI/AWWA C153/A21.53. FITTINGS SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL FITTINGS SHALL BE CEMENT–MORTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14 EXCEPT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR FITTINGS SHALL BE MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT FITTINGS SHALL BE SUPPLIED WITH GLANDS AND ACCESSORIES.

TYPE:	4 INCH TO 12 INCH DUCTILE IRON COMPACT MEETING ANSI/AWWA C153/A21.53. 16 INCH AND LARGER DUCTILE IRON MEETING ANSI/AWWA C153/A21.53 OR ANSI/AWWA C110/A21.10.
PRESSURE CLASS:	PIPE FITTINGS SHALL HAVE A PRESSURE RATING OF 350 FOR 24–INCH AND SMALLER AND 250 PSI FOR 30–INCH AND LARGER. FITTINGS SHALL AT A MINIMUM HAVE THE SAME PRESSURE RATING AS THE CONNECTING PIPE.
GASKETS:	RUBBER MEETING ANSI/AWWA C111/A21.11. NITRILE (IN CONTAMINATED SOIL).

5. MAIN LINE VALVES: VALVES UP TO 12–INCHES IN DIAMETER SHALL BE RESILIENT–SEATED STYLE. THOSE THAT ARE BURIED SHALL BE NON–RISING STEM (NRS) STYLE, OPEN 'RIGHT' (CLOCKWISE) AND CAPABLE OF PRODUCING A BUBBLE–TIGHT SEAL AT 200 PSI (EITHER DIRECTION). OPERATING NUTS SHALL BE 2–INCHES SQUARE AT THE BASE, TAPERING TO 1–15/16 INCHES SQUARE AT THE TOP AND SHALL BE MANUFACTURED OF CAST OR DUCTILE IRON AND ATTACHED TO THE STEM WITH A NUT OR PIN AT THE FACTORY. NUTS SHALL BE PAINTED RED AND MARKED WITH AN 'ARROW' TO INDICATE DIRECTION OF OPENING. VALVES SHALL HAVE MECHANICAL JOINT (MJ) ENDS, COMPLETE WITH ALL ACCESSORIES. MJ BOLTS AND NUTS SHALL BE RUST–PROOFED STEEL. VALVE EXTERIORS SHALL BE COATED WITH FUSION–BONDED EPOXY AT THE PLACE OF MANUFACTURE. IF REQUIRED, OPERATING STEM EXTENSION RODS SHALL BE FURNISHED AND INSTALLED WITH THE VALVE. BRONZE STEM MATERIAL SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70,000 PSI, YIELD STRENGTH OF 35,000 PSI AND MAXIMUM ELONGATION OF 15 PERCENT. STEM SEALS SHALL CONSIST OF AT LEAST TWO (2) O–RING SEALS. ONE SHALL FUNCTION AS A DIRT SEAL AND THE OTHER AS A PRESSURE SEAL AND BOTH SHALL BE CAPABLE OF BEING REPLACED WITH THE VALVE UNDER PRESSURE IN THE FULL OPEN POSITION. A THRUST WASHER OF AN APPROVED MATERIAL SHALL BE USED BETWEEN BEARING SURFACES OF THE STEM COLLAR AND VALVE UNDER 100 PSI PRESSURE ON ONE SIDE SHALL NOT EXCEED 100 FT–LBS AND THE TORQUE REQUIRED TO FULLY CLOSE A VALVE UNDER THE FLOW CONDITIONS OF 10 FT/SEC SHALL NOT EXCEED 100 FT–LBS. VALVES MUST BE ABLE TO WITHSTAND AN INPUT TORQUE OF 300 FT–LBS WITH NO DISTORTION OF THE STEM OR OTHER DAMAGE TO THE VALVE. GATE CROSS SECTION SHALL BE SYMMETRICAL ABOUT ITS VERTICAL AXIS. RUBBER SEATS SHALL BE NEW AND OF A COMPOUND NATURAL OR SYNTHETIC DESIGNATED FOR WATER SERVICE APPLICATION. RECLAIMED RUBBER IS NOT ACCEPTABLE. SEATS SHALL BE EITHER BONDED OR MECHANICALLY ATTACHED TO THE GATE. WHEN MECHANICALLY ATTACHED, ALL EXPOSED HARDWARE SHALL BE 18–8 TYPE 304 STAINLESS STEEL. THE WATERWAY INSIDE THE BODY OF THE VALVE SHALL BE FREE OF POCKETS, CHANNELS, CAVITIES, DEPRESSIONS OR OBSTRUCTIONS IN THE SEAT AREA. INTERIOR SURFACES OF VALVE BODIES SHALL BE FUSION–BONDED EPOXY COATED AT THE PLACE OF MANUFACTURER IN ACCORDANCE WITH CURRENT AWWA STANDARDS. FIELD COATING WITH EPOXY IS PROHIBITED. BONNET BOLTS, SEAL PLATE BOLTS, STUFFING BOX BOLTS AND OTHER BOLTS IN CONTACT WITH SOIL SHALL BE MANUFACTURED OF STAINLESS STEEL OR LOW–ZINC BRONZE.

6. VALVE BOXES: GATE VALVE BOXES SHALL CONSIST OF THREE (3) PIECES – COVER, UPPER SECTION, AND LOWER SECTION – ALL OF WHICH ARE MANUFACTURED OF CAST IRON. THE LOWER SECTION SHALL HAVE AN INSIDE DIAMETER OF NOT LESS THAN 5–1/4 INCHES AND A LENGTH OF AT LEAST 36 INCHES–IT SHALL BE DESIGNED TO TELESCOPE (SLIDE) INTO THE UPPER SECTION. UPPER SECTION LENGTH SHALL BE 26–INCHES. COVERS SHALL HAVE THE WORD 'WATER' (IN CAPS) CAST UPON THEM. GATE VALVE BOX ALIGNERS SHALL BE USED IN EVERY GATE VALVE BOX INSTALLATION.

   GAVE VALVE ROADWAY BOX – A GATE VALVE ROADWAY BOX SHALL CONSIST OF THREE (3) PIECES – COVER, UPPER SECTION, AND LOWER SECTION – ALL OF WHICH ARE MANUFACTURED OF CAST IRON. THE LOWER SECTION INCORPORATES TWO (2) DIAMETRICALLY OPPOSED HORSESHOE–SHAPED OPENINGS, WHICH ARE DESIGNED TO STRADDLE SERVICE PIPES UP TO 2–INCHES IN DIAMETER. ADDITIONALLY, THE LOWER SECTION SHALL HAVE AN INSIDE DIAMETER OF NOT LESS THAN 4–1/4" AND A LENGTH OF 36 INCHES – IT SHALL BE DESIGNED TO TELESCOPE (SLIDE) INTO THE UPPER SECTION. UPPER SECTION LENGTH SHALL BE 26–INCHES. COVERS SHALL HAVE THE WORD 'WATER' (IN CAPS) CAST UPON THEM. GATE VALVE BOX ALIGNERS SHALL BE USED IN EVERY GATE VALVE BOX INSTALLATION.

7. DUCTILE IRON COUPLINGS: SLEEVE COUPLINGS AND ACCESSORIES SHALL BE PRESSURE RATED TO AT LEAST EQUAL TO THAT OF THE PIPE. COUPLINGS SHALL BE DUCTILE IRON. AFTER ASSEMBLY, ALL EXTERIOR SURFACES, INCLUDING BOLTS AND NUTS, SHALL BE THOROUGHLY COATED WITH TWO (2) COATS OF HEAVY–DUTY PROTECTIVE ASPHALTIC COATING. THE INTERIOR OF THE COUPLING SHALL BE FUSION–BONDED EPOXY COATED IN ACCORDANCE WITH AWWA STANDARDS, COMPOSED OF THERMOSETTING EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 10 MILS AND A MAXIMUM OF 20 MILS. BOLTS AND NUTS SHALL BE RUST–PROOFED STEEL.

8. MECHANICAL JOINT RESTRAINT DEVICES FOR NOMINAL PIPE SIZES 3 INCH THROUGH 48 INCH SHALL CONSIST OF MULTIPLE GRIPPING WEDGES INCORPORATED INTO A FOLLOWER GLAND MEETING THE APPLICABLE REQUIREMENTS OF ANSI/AWWA C110/A21.10. THE DEVICES SHALL HAVE A WORKING PRESSURE RATING OF 350 PSI FOR 3–16 INCH AND 250 PSI FOR 18–48 INCH. RATINGS ARE FOR WATER PRESSURE AND MUST INCLUDE A MINIMUM SAFETY FACTOR OF 2 TO 1 IN ALL SIZES. GLAND BODY, WEDGES AND WEDGE ACTUATING COMPONENTS SHALL BE CAST FROM GRADE 65–45–12 DUCTILE IRON MATERIAL IN ACCORDANCE WITH ASTM A536. SHALL BE MEGALUG SERIES 1100 PRODUCED BY EBAA IRON INC. OR APPROVED EQUAL.

9. BLOW OFF ASSEMBLY: A 2" BLOW OFF ASSEMBLY SHALL BE USED AT THE TERMINUS OF A 'DEAD END' MAIN. IT CONSISTS OF THE FOLLOWING 2" DIAMETER COMPONENTS: TAPPING SADDLE, BRASS NIPPLES, BRASS ELBOW, CURB STOP VALVE (OPEN RIGHT) WITH DRAIN, GALVANIZED PIPE, DUCTILE IRON END CAP (MJ) FOR MAIN, POURED CONCRETE THRUST BLOCK, CAST IRON 4–1/4 INCH GATE VALVE ROADWAY BOX, AND CAST IRON 5–1/4" GATE VALVE BOX. COMPONENTS SHALL BE JOINED TOGETHER WITH IRON PIPE THREADS.

10. SERVICE PIPE UP TO 2 INCHES IN DIAMETER ON THE CUSTOMER'S SIDE SHALL BE TYPE 'K' COPPER. SERVICE SIZE WILL BE DETERMINED BY PWSB BASED UPON INFORMATION SUPPLIED BY THE CUSTOMER. USE OF INTERMEDIATE COUPLINGS IS NOT PERMITTED. CURB BOXES SHALL BE INSTALLED DIRECTLY OVER THE CURB STOP AND BROUGHT TO FINISH GRADE. THEY SHALL BE A 'BUFFALO' TYPE (SLIDING), CAST IRON, 3–3/8 INCH INSIDE DIAMETER AND OF SUFFICIENT LENGTH FOR FULL COVERAGE FOR STOPS NO MORE THAN 1 INCH IN DIAMETER. BOX COVERS SHALL BE A LOCKING TYPE AND HAVE THE WORD 'WATER' (IN CAPS) CAST UPON IT. GATE VALVE ROADWAY BOXES SHALL BE USED FOR 1–1/2 AND 2–INCH CURB STOPS.

11. CORPORATION STOPS SHALL BE FROM APPROVED MATERIALS LIST AND BE OF THE BRONZE COMPRESSION TYPE WITH COPPER TUBE SIZE ON THE SERVICE SIDE.

12. CURB STOPS SHALL BE LOCATED ONE (1) FOOT BEHIND FACE OF CURB OR EDGE OF PAVEMENT. CURB STOPS SHALL BE FROM THE APPROVED MATERIALS LIST AND BE BRONZE, COMPRESSION FITTED, WITHOUT DRIP. DIRECTION OF OPENING SHALL BE TO THE 'RIGHT'.

13. SERVICE BOXES SHALL BE FROM THE APPROVED MATERIALS LIST.

14. MINIMUM COVER OVER SERVICE PIPE IS 4'–6".

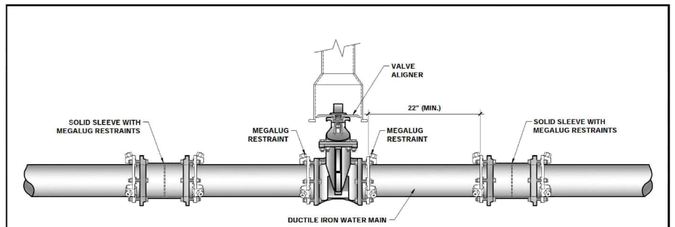
15. PROVIDE WARNING TAPE OVER SERVICES, AS SHOWN IN TRENCH DETAIL.

16. THE WATER MAIN SHALL BE FLUSHED, PRESSURE TESTED TO A MINIMUM OF 150 PSI (OR 1.5X STATIC PRESSURE, WHICHEVER IS GREATER) AND CHLORINATED/DISINFECTED IN ACCORDANCE WITH PWSB RULES & REGULATIONS.

17. PROTECTION OF WATER LINES:

   A. HORIZONTAL SEPARATION: WATER MAINS AND SERVICES SHALL BE LAID AT A MINIMUM AT LEAST 10 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED SEWER MAIN OR SERVICE. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, THE SEWER LINE SHALL BE CONSTRUCTED OF C–900, CLASS 150 (DR18) POLYVINYL CHLORIDE PRESSURE PIPE.

   B. VERTICAL SEPARATION: WHENEVER SEWERS CROSS UNDER WATER MAINS, OR SERVICES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE RELOCATED TO PROVIDE THIS SEPARATION, THE SEWER LINE SHALL BE CONSTRUCTED OF CLASS 150 (DR18) POLYVINYL CHLORIDE PRESSURE PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE WATER MAIN.

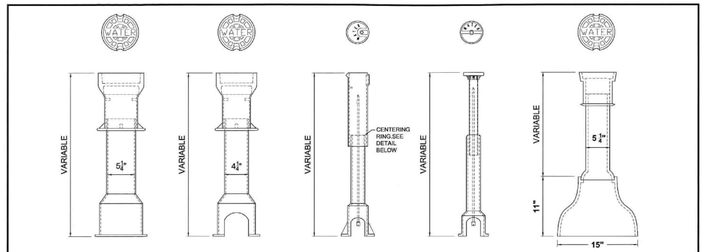


TYPICAL GATE VALVE W/ SOLID SLEEVES

NOT TO SCALE

Senior Manager of Engineering — Date: 2/5/13

Providence Water



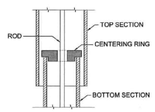
GATE VALVE BOX BINGHAM & TAYLOR FIG. NO. 4908 OR EQUIVLANT

ROADWAY BOX 1-1/2" - 2" SERVICE BINGHAM & TAYLOR FIG. NO. 4903 OR EQUIVLANT

BUFFALO BOX USED UNDER SPECIAL CICUMSTANCES BINGHAM & TAYLOR FIG. NO. 4901 OR EQUIVLANT

ERIE BOX 3/4" - 1" SERVICE BINGHAM & TAYLOR FIG. NO. E-100 / E-125 OR EQUIVLANT

3-PIECE VALVE BOX WEDGE 2" BLOW OFF BINGHAM & TAYLOR FIG. NO. 4909-A OR EQUIVLANT

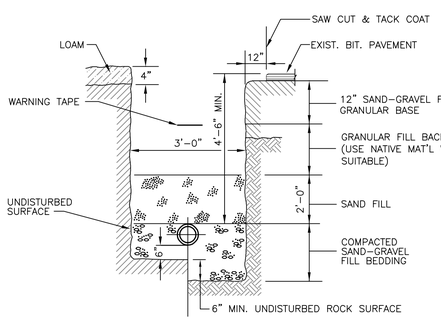


VALVE & CURBSTOP BOXES

NOT TO SCALE

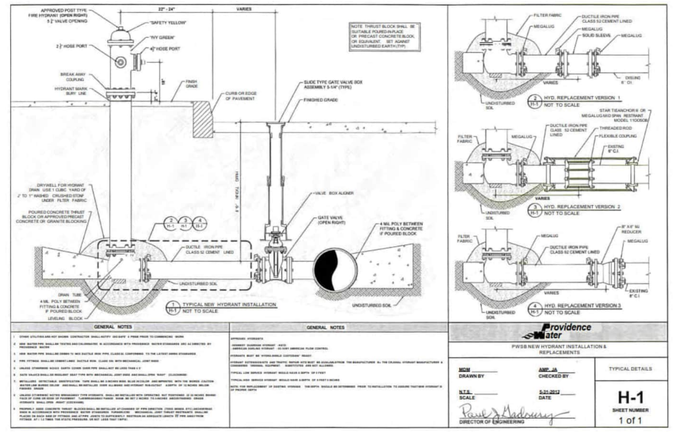
Senior Manager of Engineering — Date: 3/5/13

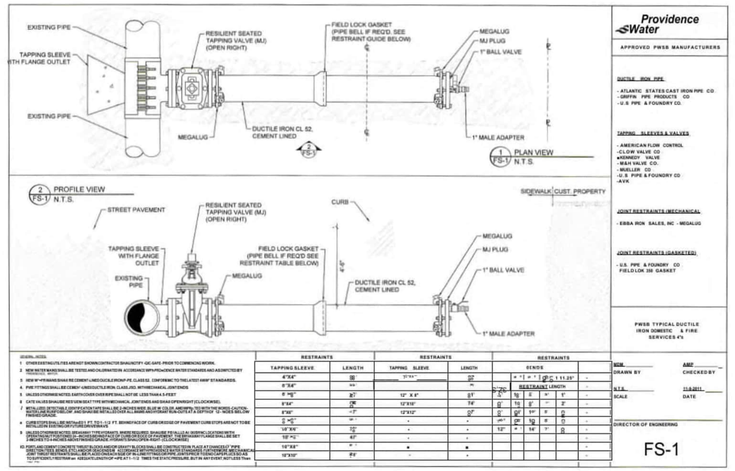
Providence Water



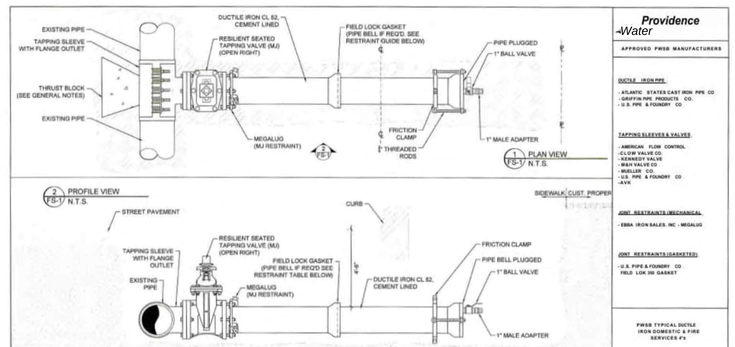
WATER SYSTEM TYPICAL TRENCH DETAIL

NOT TO SCALE





RESTRAINTS		RESTRAINTS		RESTRAINTS						
TAPPING SLEEVE	LENGTH	TAPPING SLEEVE	LENGTH	BENDS						
4"X4"	36"	6"X4"	22"							
6"X4"	44"	6"X6"	22"	4"	11 1/4°	22 1/2°	45°	90°		
8"X4"	44"	8"X4"	22"	RESTRAINT LENGTH						
8"X6"	44"	8"X6"	22"	4"	36"	36"	36"	36"	-	
8"X8"	44"	8"X8"	22"	6"	36"	36"	36"	36"	-	
10"X4"	44"	10"X4"	22"	8"	36"	36"	36"	36"	-	
10"X6"	44"	10"X6"	22"	10"	36"	36"	36"	36"	-	
10"X8"	44"	10"X8"	22"	12"	36"	36"	36"	36"	-	
10"X10"	44"	10"X10"	22"	16"	36"	36"	36"	36"	-	
12"X4"	44"	12"X4"	22"							
12"X6"	44"	12"X6"	22"							
12"X8"	44"	12"X8"	22"							
12"X10"	44"	12"X10"	22"							
12"X12"	44"	12"X12"	22"							
16"X4"	44"	-	-							
16"X6"	44"	-	-							
16"X8"	44"	-	-							
16"X10"	44"	-	-							
16"X12"	44"	-	-							
16"X16"	44"	-	-							



RESTRAINTS		RESTRAINTS		RESTRAINTS						
TAPPING SLEEVE	LENGTH	TAPPING SLEEVE	LENGTH	BENDS						
4"X4"	36"	6"X4"	22"							
6"X4"	44"	6"X6"	22"	4"	11 1/4°	22 1/2°	45°	90°		
8"X4"	44"	8"X4"	22"	RESTRAINT LENGTH						
8"X6"	44"	8"X6"	22"	4"	36"	36"	36"	36"	-	
8"X8"	44"	8"X8"	22"	6"	36"	36"	36"	36"	-	
10"X4"	44"	10"X4"	22"	8"	36"	36"	36"	36"	-	
10"X6"	44"	10"X6"	22"	10"	36"	36"	36"	36"	-	
10"X8"	44"	10"X8"	22"	12"	36"	36"	36"	36"	-	
10"X10"	44"	10"X10"	22"	16"	36"	36"	36"	36"	-	
12"X4"	44"	12"X4"	22"							
12"X6"	44"	12"X6"	22"							
12"X8"	44"	12"X8"	22"							
12"X10"	44"	12"X10"	22"							
12"X12"	44"	12"X12"	22"							
16"X4"	44"	-	-							
16"X6"	44"	-	-							
16"X8"	44"	-	-							
16"X10"	44"	-	-							
16"X12"	44"	-	-							
16"X16"	44"	-	-							

DRAWING ISSUE:

- ☐ CONCEPT
- ☐ CUSTOMER APPROVAL
- ☒ PERMITTING
- ☐ CONSTRUCTION
- ☐ AS–BUILT
- ☐ OTHER:

ONLY PLANS ISSUED FOR CONTRUCTION SHALL BE USED FOR CONSTRUCTION

Finegold Alexander Architects

PROJECT TEAM:

OWNER:
Cranston Public Schools
845 Park Ave.
Cranston, RI 02910

Structural Engineer
ODEH Engineers
1223 Mineral Spring Ave.
N. Providence, RI 02904

MEP Engineer
Creative Environment Corp.
195 Frances Ave., Bldg #2
Cranston, RI 02910

Fire Protection & Code
Jensen Hughes
117 Metro Center Blvd., Suite 1002
Warwick, RI 02886

Technology
DA-Technology
477 Main St., Suite 210B
Monroe, CT 06468

Civil Engineer
Commonwealth Engineers
400 Smith St.
Providence, RI 02909

Landscape Architect
Traverse Landscape Architects
150 Chestnut St. 4th Fl.
Providence, RI 02903

Kitchen Design
Crabtree McGrath
161 West Main St.
Georgetown, MA01833

KEY PLAN:

SEAL:

TIMOTHY J. BEHAN — No. 6278 — REGISTERED PROFESSIONAL ENGINEER

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Civil Details 5

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

CD105

SEWER NOTES:

1. ALL CONSTRUCTION, MATERIALS, SPECIFICATIONS, AND PROCEDURES SHALL CONFORM WITH THE SANITARY SEWER REQUIREMENTS OF THE CITY OF CRANSTON/VEOLIA WATER (ANNEX A – DESIGN OF SEWERS) AND ALL APPLICABLE FEDERAL, STATE AND CITY BUILDING AND PLUMBING CODES. ANY DEVIATIONS FROM THESE PRESCRIBED PROCEDURES AND MATERIALS SHALL BE APPROVED BY THE SEWER SUPERINTENDENT BEFORE INSTALLATION. THE CONTRACTOR SHALL REVIEW SAID STANDARD PRIOR TO ANY WORK. THE CITY'S STANDARDS SUPERSEDE THESE DESIGN PLANS WHERE CONFLICTS EXIST.

2. PROTECTION OF WATER LINES:
   A. HORIZONTAL SEPARATION: SEWERS SHALL BE LAID AT A MINIMUM OF AT LEAST 10 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAIN OR SERVICE.
   B. VERTICAL SEPARATION: WHENEVER SEWERS CROSS UNDER WATER MAINS, OR SERVICES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. SEWERS SHALL ALWAYS CROSS UNDER WATER MAINS OR SERVICES.

3. PIPE SHALL BE LAID IN THE DRY, AND AT NO TIME SHALL WATER IN THE TRENCH BE PERMITTED TO FLOW INTO THE SEWER.

4. BACKFILL FROM THE CENTERLINE OF THE PIPE TO A HEIGHT OF TWO FEET ABOVE THE PIPE SHALL BE SAND BLANKET MATERIAL, PLACED EVENLY FOR THE FULL WIDTH OF THE TRENCH AND COMPACTED IN 12-INCH LAYERS. THE REMAINDER OF THE TRENCH SHALL BE BACKFILLED EVENLY WITH SUITABLE (EXCAVATED OR BORROW) BACKFILL MATERIAL AND COMPACTED IN 12-INCH LAYERS. CUSHION AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY BY TAMPING AND COMPACTING IN LAYERS (ONE (1) FOOT MAXIMUM) TO ACHIEVE THE REQUIRED COMPACTION.

5. THE CONTRACTOR SHALL SUBMIT AN AS-BUILT DRAWING AFTER COMPLETION OF THE SERVICE CONNECTIONS UTILIZING DISTANCES FROM PERMANENT STRUCTURES. THE DEPTH OF THE SEWER MAIN AT THE PROPERTY LINE AND AT THE DWELLING UNIT SHALL BE RECORDED, AS WELL AS TIES TO ALL CLEANOUTS AND BENDS.

6. ALL GRAVITY PIPE AND FITTINGS SHALL BE PVC SDR35/SCH40 MEETING ASTM D3034 UNLESS NOTED OTHERWISE. LOW PRESSURE SEWER PIPE SHALL BE SDR21 PVC PRESSURE PIPE WITH GASKETED JOINTS, AND SHALL BE FULLY RESTRAINED AGAINST PULL-OUT.

7. BACKFLOW PREVENTER: ALL CONNECTIONS ARE TO BE EQUIPPED WITH A BACKFLOW PREVENTER. BACKFLOW PREVENTERS MUST CONFORM WITH THE CRANSTON BUILDING INSPECTOR'S REQUIREMENTS AND THE BUILDING OFFICIALS CODE ADMINISTRATORS BASIC NATIONAL PLUMBING CODE, ARTICLE 10, SECTION P-1003.0.

8. INSPECTION: ALL SEWER LINE CONSTRUCTION SHALL BE INSPECTED BY THE CITY/VEOLIA WATER PRIOR TO BACKFILLING.

9. TESTING: THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE PIPE DEFLECTION TEST ON EACH SECTION OF PIPE INSTALLED. ALL TESTING SHALL BE WITNESSED BY THE CITY/VEOLIA WATER. NO SEWER FLOWS ARE ALLOWED UNTIL AUTHORIZED BY THE CITY/VEOLIA WATER.

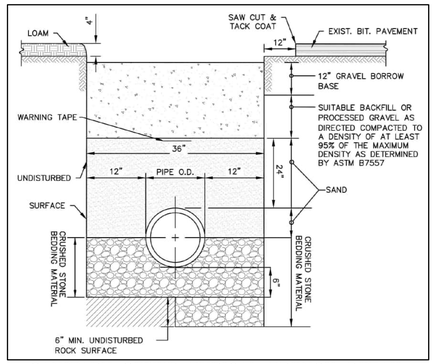
10. MAINTENANCE OF SEWAGE FLOWS: THE CONTRACTOR SHALL MAINTAIN SEWAGE FLOWS ON SUBJECT SITE UNTIL ALL WORK HAS BEEN ACCEPTED BY THE CITY/VEOLIA WATER. SEWAGE DISCHARGES OR OVERFLOWS ARE STRICTLY PROHIBITED.

SEWER TRENCH MATERIAL SPECIFICATION:

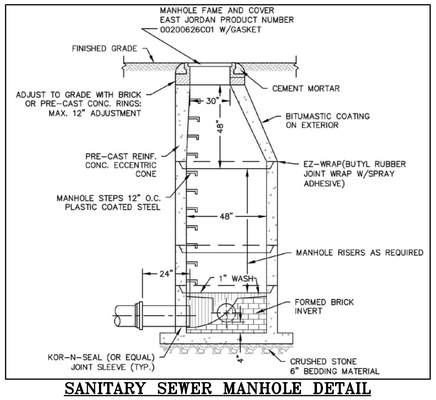
1. BEDDING MATERIAL: THE BEDDING MATERIAL SHALL BE CRUSHED STONE CONSISTING OF DURABLE CRUSHED ROCK IN DURABLE CRUSHED GRAVEL STONE, FREE FROM ICE, SNOW, SAND, CLAY, LOAM, OR OTHER DELETERIOUS MATERIAL. THE CRUSHED STONE SHALL CONFORM TO THE REQUIREMENTS OF 100% PASSING THE ONE (1) INCH SCREEN, 90-100% PASSING THE THREE-QUARTER (3/4) INCH SCREEN, 10- 50% PASSING THE ONE-HALF (1/2) INCH SCREEN, 0-20% PASSING THE THREE-EIGHTS (3/8) INCH SCREEN AND 0-5% PASSING THE NUMBER FOUR (4) SIEVE.

2. SAND BLANKET: THE SAND SHALL BE FREE FROM ICE, SNOW, ROOTS, RUBBISH, AND OTHER DELETERIOUS OR ORGANIC MATTER. THE SAND BLANKET SHALL CONFORM TO 22 THE REQUIREMENTS OF 100% PASSING ONE-HALF (1/2) INCH SCREEN, 85-100% PASSING THE THREE-EIGHTS (3/8) INCH SCREEN, 60-85% PASSING THE NUMBER FOUR (#4) SIEVE, 35-60% PASSING THE NUMBER SIXTEEN (#16) SIEVE, 10-35% PASSING THE NUMBER FIFTY (#50) SIEVE AND 2-10% PASSING THE NUMBER ONE-HUNDRED (#100) SIEVE.

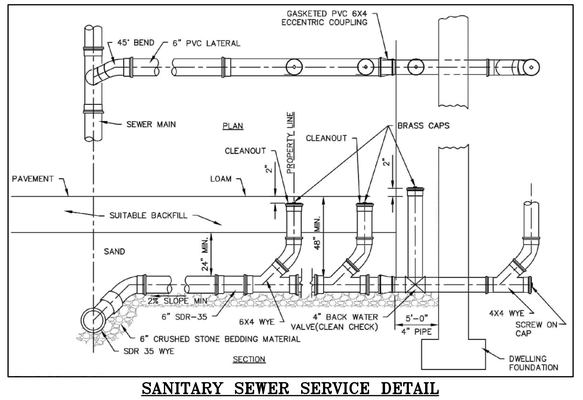
3. BACKFILL: BACKFILL SHALL BE EXCAVATED MATERIALS FREE-DRAINING CLEAN GRANULAR SOIL SUITABLE FOR BACKFILL. UP TO 20 PERCENT OF BACKFILL MATERIAL MAY BE ROCK-LIKE MATERIALS NOT TO EXCEED 0.05 CUBIC FEET IN VOLUME, NOR MORE THAN 6 INCHES IN LENGTH. THE BACKFILL SHALL NOT CONTAIN ANY DEBRIS, PAVEMENT, FROZEN MATERIAL, ORGANIC MATTER, OR PEAT.



SANITARY SEWER TYPICAL TRENCH DETAIL
NOT TO SCALE



SANITARY SEWER MANHOLE DETAIL
NOT TO SCALE



SANITARY SEWER SERVICE DETAIL
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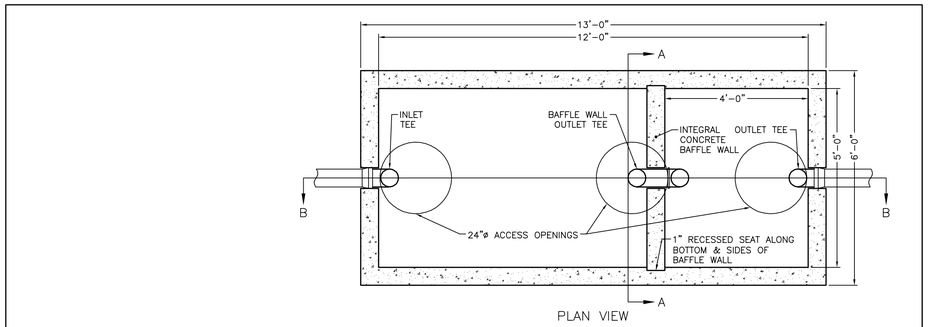
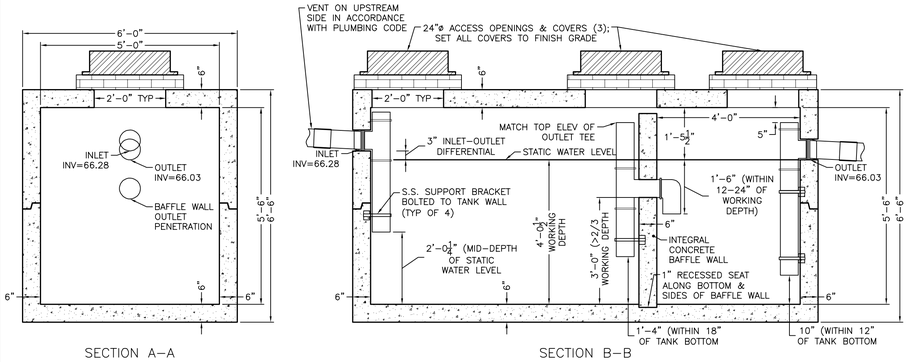


PLAN VIEW



SECTION B-B

2,000 GALLON GREASE TANK

NOTES:
1. DEPICTED TANK IS BASED ON DIMENSIONS FOR "2,000 GALLON GREASE TRAP" AS MANUFACTURED BY DURASTONE CORPORATION. CONTRACTOR MAY PROPOSE A TANK FROM AN ALTERNATE TANK MANUFACTURER, PROVIDED THAT ALL ELEMENTS OF THE PROPOSED TANK MEET THE ELEMENTS DEPICTED HEREON. USE OF ALTERNATE TANK IS SUBJECT TO THE APPROVAL OF THE ENGINEER, WHICH SHALL BE THE SOLE JUDGE OF WHETHER AN ALTERNATIVE TANK IS AN ACCEPTABLE SUBSTITUTE.
2. MINIMUM 28-DAY CONCRETE STRENGTH: 5,000 PSI
3. STEEL REINFORCEMENT: ASTM A615 GRADE 60, MIN. 1" COVER
4. DESIGN & DETAILING CODE: ACI318
6. RATED FOR AASHTO HS-20 LIVE LOADS.
7. ALL JOINTS SEALED WITH 1" BUTYL RUBBER SEALANT.
8. INLET AND OUTLET OPENINGS SHALL HAVE KOR-N-SEAL BOOTS FOR PVC PIPES.
9. ALL PIPE AND FITTINGS SHALL BE SDR 35 PVC.
10. ENTIRE EXTERIOR OF TANK SHALL BE BITUMINOUS COATED (SINGLE-COAT).
11. SEAMS ALONG BOTH SIDES OF BAFFLE WALL SHALL BE FIELD-GROUTED DURING INSTALLATION.
12. TOPS OF INLET TEE, OUTLET TEES AND BAFFLE WALL SHALL BE ACCESSIBLE THROUGH ACCESS OPENINGS AND COVERS.
13. TANK SHALL BE VACUUM TESTED AT THE SITE; TEST SHALL BE OBSERVED BY REPRESENTATIVE(S) OF THE CITY OF CRANSTON.
14. TANK SHALL BE INSTALLED IN CONFORMANCE WITH THE TYPICAL GREASE INTERCEPTOR CONFIGURATION DETAIL (TGICD) OF THE CITY OF CRANSTON, RI MUNICIPAL INDUSTRIAL PRETREATMENT PROGRAM.

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Cranston, RI 02910

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Kitchen Design
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161 West Main St.
Georgetown, MA01833

KEY PLAN:

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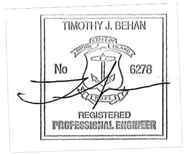

PROJECT INFORMATION:

Gladstone Elementary School

PROJECT #:	P0276.00
ISSUE DATE:	March 24, 2023
PROJECT STATUS:	DD Submission
DRAWN BY:	MCZ
CHECKED BY:	TJB

SHEET NAME:

Civil Details 6

DRAWING HISTORY:

NO.	DATE	DESCRIPTION

SHEET #:

CD106