

TOWN OF DOVER, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
PROPOSED SITE IMPROVEMENTS

Project: **TOWN OF DOVER**
DEPARTMENT OF PUBLIC WORKS
SITE IMPROVEMENTS
2 DEDHAM STREET
DOVER, MA 02030



The logo for Weston & Sampson Engineers, Inc. It features the word "Weston" in blue, the word "&" in a white circle, and the word "Sampson" in green. A small "SM" is in the top right corner of the "Sampson" text. Below the logo is the company name and address: Weston & Sampson Engineers, Inc., 100 Foxborough Boulevard, Suite 250, Foxborough, MA 02035. To the right of the address is the phone number 800.SAMPSON. At the bottom is the website www.westonandsampson.com.

Consultants:

| Revisions: | | |
|------------|----------|-------------------------------|
| No. | Date | Description |
| 3 | 08/12/24 | PERMITTING FUEL SYSTEM DESIGN |
| 2 | 05/15/24 | PER CONSERVATION FEEDBACK |
| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |

COA:



Issued For:

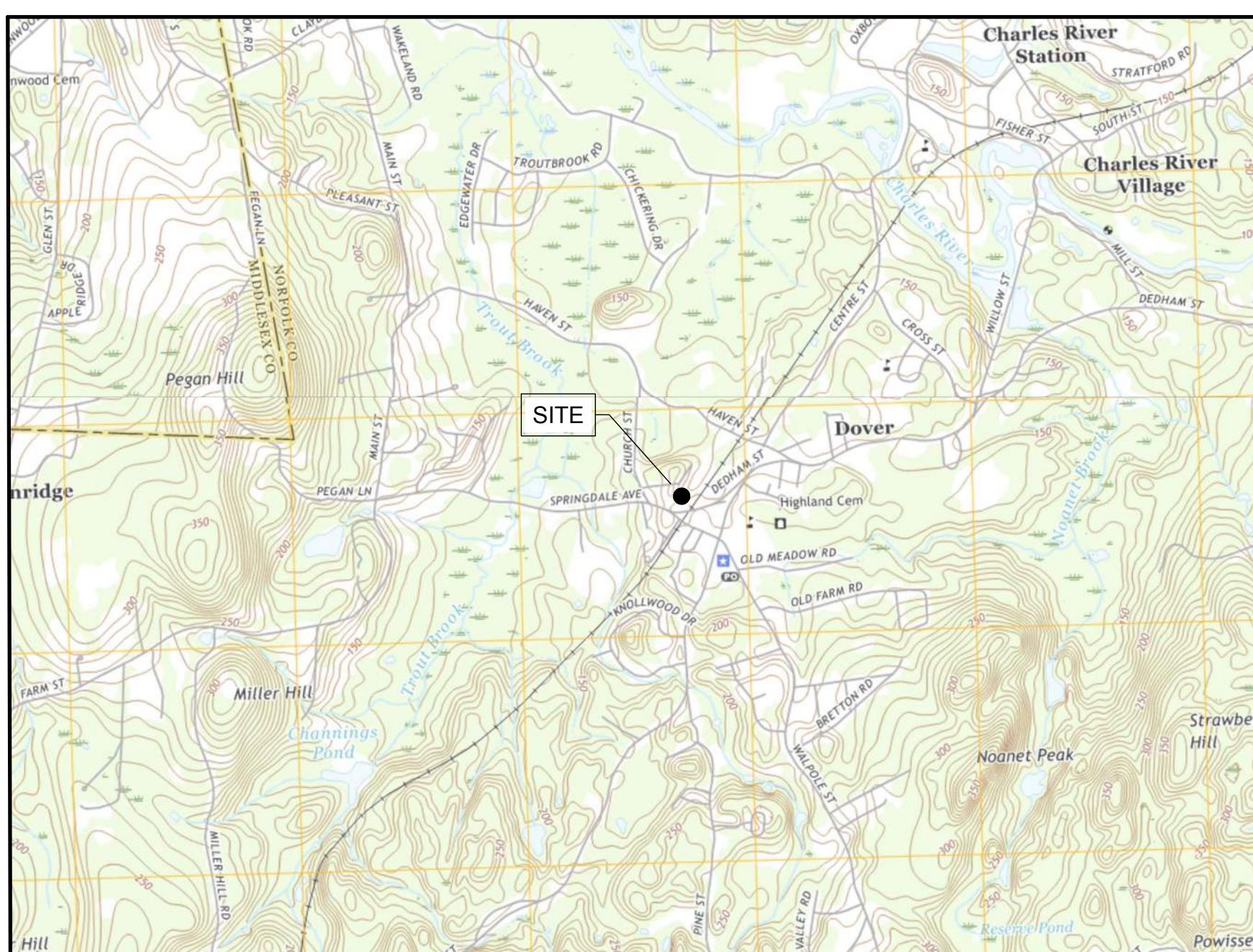
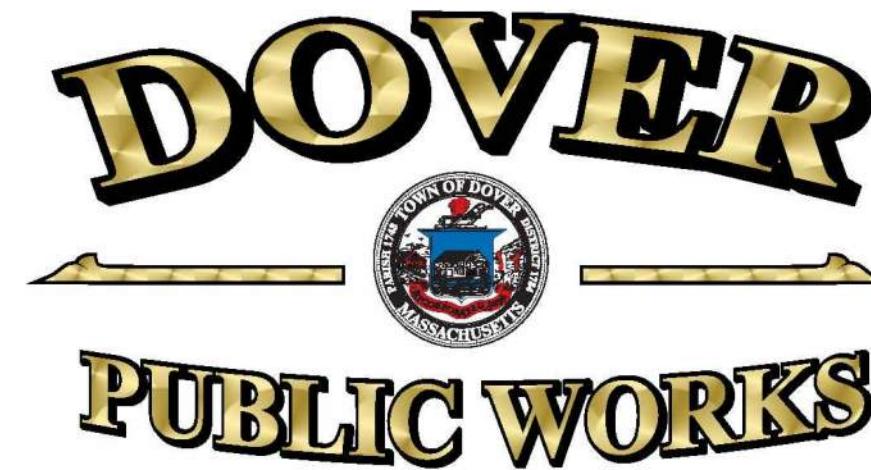
Section 1

Date: APRIL 2024
Drawn By:
Reviewed By:
Approved By:
W&S Project No.: ENG22-1087
W&S File No.:

Drawing Title: **COVER**

Sheet Number: **C000**

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USGS LOCUS MAP

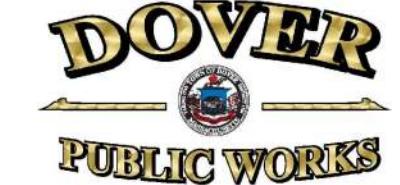
1" = 20

DRAWING INDEX

| <u>SHEET NO.</u> | <u>DRAWING NO.</u> | <u>TITLE</u> |
|------------------|--------------------|----------------------------------|
| 1 | C000 | COVER |
| 2 | C001 | GENERAL NOTES & LEGEND |
| 3 | C100 | OVERALL EXISTING CONDITIONS PLAN |
| 4 | C101 | EXISTING CONDITIONS PLAN I |
| 5 | C102 | EXISTING CONDITIONS PLAN II |
| 6 | C103 | SITE PREPARATION PLAN |
| 7 | C104 | PROPOSED SITE PLAN |
| 8 | C105 | PROPOSED FUEL SYSTEM PLAN |
| 9 | C501 | DETAILS I |
| 10 | C502 | DETAILS II |
| 11 | C503 | DETAILS III |
| 12 | C504 | DETAILS IV |
| 13 | C505 | DETAILS V |
| 14 | EQ501 | FUEL SYSTEM LAYOUT |
| 15 | EQ502 | FUEL SYSTEM DETAILS I |
| 16 | EQ503 | FUEL SYSTEM DETAILS II |
| 17 | EQ504 | CANOPY LAYOUT |

Weston & SampsonSM

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GENERAL NOTES

- EXISTING CONDITIONS INFORMATION IS BASED UPON A SURVEY PERFORMED BY NORFOLK COUNTY ENGINEERING DEPARTMENT, FROM FIELD SURVEY WORK PERFORMED IN EARLY 2024. WETLAND RESOURCE AREA INFORMATION SHOWN ON THESE PLANS IS BASED UPON A FIELD WETLAND DELINEATION PERFORMED BY WESTON & SAMPSON, INC. ON OCTOBER 12, 2023.
- ALL BIDDERS ARE REQUIRED TO INSPECT THE PROJECT SITE IN ITS ENTIRETY PRIOR TO SUBMITTING THEIR BID, AND BECOME FAMILIAR WITH ALL CONDITIONS AS THEY MAY AFFECT THEIR BID. CONTRACTOR AND SUB-CONTRACTOR SHALL BE FAMILIAR WITH ALL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING THE CONSTRUCTION.
- LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF SUCH UTILITIES, PROTECTING ALL EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE COORDINATION WITH UTILITY COMPANIES AND PUBLIC AGENCIES AND FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ALL REQUIRED FEES. IN ACCORDANCE WITH M.G.L. CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING PRIOR TO EXCAVATION. CONTRACTOR SHALL ALSO CALL "DIG SAFE" AT 888.344.7233 LESS THAN 72 HOURS, (EXCLUSIVE OF WEEKENDS AND HOLIDAYS), PRIOR TO SUCH EXCAVATION. DOCUMENTATION OF REQUESTS SHALL BE PROVIDED TO PROJECT REPRESENTATIVE PRIOR TO EXCAVATION WORK.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF EXCAVATION AND DEMOLITION REQUIRED TO RECEIVE SITE IMPROVEMENTS.
- ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION, PERMANENT CONSTRUCTION AND WORK OF ADJACENT CONTRACTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE PROCEEDING. ITEMS ENCOUNTERED IN AREAS OF EXCAVATION THAT ARE NOT INDICATED ON THE DRAWINGS, BUT ARE VISIBLE ON SURFACE, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
- ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON "AS-BUILT" DRAWINGS.
- ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE THE PROJECT LIMITS, SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
- ALL WORK SHOWN ON THE PLANS AS BOLD SHALL REPRESENT PROPOSED WORK. THE TERM "PROPOSED (PROP)" INDICATES WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET (R&R)", OR REMOVE, RELOCATE, RESET, (R&R).
- ALL KNOWN EXISTING STATE, COUNTY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND ARE INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS FROM INJURY DURING THE ENTIRE CONSTRUCTION PERIOD USING ALL NECESSARY SAFEGUARDS, INCLUDING BUT NOT LIMITED TO, THE ERECTION OF TEMPORARY WALKS, STRUCTURES, PROTECTIVE BARRIERS, COVERING, OR FENCES AS NEEDED.
- THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA "COMPETENT PERSON" PRIOR TO CONSTRUCTION.
- FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER.
- EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. NO STOCKPILING OF MATERIAL, EQUIPMENT OR VEHICULAR TRAFFIC SHALL BE ALLOWED WITHIN THE DRIP LINE OF TREES TO REMAIN. NO GUYS SHALL BE ATTACHED TO ANY TREE TO REMAIN. WHEN NECESSARY OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL ERECT TEMPORARY BARRIERS FOR THE PROTECTION OF EXISTING TREES DURING CONSTRUCTION.
- TREES AND SHRUBS WITHIN THE LIMITS OF WORK SHALL BE REMOVED ONLY UPON THE APPROVAL OF THE ENGINEER OR AS NOTED ON THE PLANS.
- NO FILLING SHALL OCCUR AROUND EXISTING TREES TO REMAIN WITHOUT THE APPROVAL OF THE OWNER OR OWNER REPRESENTATIVE.
- THE CONTRACTOR SHALL REMOVE ALL SURFACE VEGETATION PRIOR TO GRADING THE SITE. TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS (INCLUDING SILT FENCE AND COMPOSITE FILTER TUBES) SHALL BE INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE PROJECT WHICH COST SHALL BE INCIDENTAL TO THE PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR STAKING CONSTRUCTION BASELINES IN FIELD. NO CONSTRUCTION WILL BE PERFORMED WITHOUT THE PROPOSED BASELINES AND LAYOUTS APPROVED BY THE ENGINEER.
- NO FILL SHALL CONTAIN HAZARDOUS MATERIALS.
- CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AROUND PERIMETER OF WORK AREA (LIMIT OF WORK). FENCE SHALL NOT IMPEDE TRAVEL WAYS.
- ANY QUANTITIES SHOWN ON PLANS ARE FOR COMPARATIVE BIDDING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE PROJECT SITE TO VERIFY ALL QUANTITIES AND CONDITIONS PRIOR TO SUBMITTING BID.
- ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS, SOIL, SEDIMENT, AND FOREIGN MATERIAL AND OPERATIONAL THROUGHOUT THE LIFE OF THE CONTRACT. REMOVE ALL SOIL, SEDIMENT, DEBRIS AND FOREIGN MATERIAL FROM ALL DRAINAGE STRUCTURES, INCLUDING BUT NOT LIMITED TO, DRAINAGE INLETS, MANHOLES AND CATCH BASINS WITHIN THE LIMIT OF WORK AND DRAINAGE STRUCTURES OUTSIDE THE LIMIT OF WORK THAT ARE IMPACTED BY THE WORK FOR THE ENTIRE DURATION OF CONSTRUCTION.
- CONTRACTOR'S STAGING AREA MUST BE WITHIN THE CONTRACT LIMIT LINE AND IN AREAS APPROVED BY OWNER. ANY OTHER AREAS THAT THE CONTRACTOR MAY WISH TO USE FOR STAGING MUST BE COORDINATED WITH THE OWNER.
- THE CONTRACTOR SHALL KEEP ALL STREETS, PARKING LOTS AND SIDEWALKS THAT ARE NOT RESTRICTED FROM PUBLIC USE DURING CONSTRUCTION BROOM CLEAN AT ALL TIMES. THE CONTRACTOR SHALL USE ACCEPTABLE METHODS AND MATERIALS TO MAINTAIN ADEQUATE DUST CONTROL THROUGHOUT CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER.
- CONTRACTOR SHALL Dewater AS NECESSARY TO PERFORM THE PROPOSED WORK. SEE SPECIFICATION SECTION 003132 SUBSURFACE DATA.
- THE LIMIT OF WORK SHALL BE DELINEATED IN THE FIELD PRIOR TO THE START OF SITE CLEARING OR CONSTRUCTION.
- DEEP SUMP CATCH BASINS AND STORMWATER BASIN SHALL BE CLEANED FOLLOWING CONSTRUCTION AND SHALL FOLLOW THE OPERATION AND MAINTENANCE PLAN THEREAFTER.
- HAULING OF EARTH MATERIALS TO AND FROM THE SITE SHALL BE RESTRICTED TO THE HOURS SPECIFIED BY THE MUNICIPALITY'S BYLAWS.
- ANY BOULDERS 3 CY OR SMALLER SHALL BE CONSIDERED UNDOCUMENTED FILL AND SHALL BE DISPOSED OF AT NO ADDITIONAL COST TO THE MUNICIPALITY.
- WORK ON SATURDAYS SHALL ONLY BE CONDUCTED IF PRIOR WRITTEN PERMISSION IS PROVIDED BY THE OWNER.
- THE TERM "AS DIRECTED" AS USED IN THE CONTRACT DRAWINGS SHALL BE REPLACED WITH "AS REQUIRED".

EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION. REFER TO PLAN FOR APPROXIMATE LOCATION OF EROSION AND SEDIMENT CONTROL. REFER TO SPECS AND/OR DETAILS FOR TYPE OF EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL MEET ALL OF THE STATE OF MASSACHUSETTS D.E.P. AND THE MUNICIPALITY'S ORDINANCE REGULATIONS FOR SEDIMENT AND EROSION CONTROL.
- EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE. THE LIMITS OF ALL GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMIT OF CONTRACT SHALL REMAIN TOTALLY UNDISTURBED UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
- ALL CATCH BASINS AND DRAIN GRATES WITHIN LIMIT OF CONTRACT SHALL BE PROTECTED WITH FILTER FABRIC DURING THE ENTIRE DURATION OF CONSTRUCTION.
- EROSION CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE SITE PREPARATION PLAN, NOTES, DETAILS, AND SPECIFICATIONS.
- ANY AREA OUTSIDE THE PROJECT LIMIT THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY OWNER.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON PUBLIC/PRIVATE ROADS.

DEMOLITION & SITE PREPARATION NOTES

- THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
- THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT AN ADDITIONAL COST.
- UNLESS SPECIFICALLY NOTED TO BE SAVED / STOCKPILED (R&S) OR REUSED / RELOCATED (R&R), ALL SITE FEATURES CALLED FOR REMOVAL (REM) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC. TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO COST TO THE OWNER.
- ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
- DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL, AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPAKED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.
- IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER, TO REUSE EXISTING GRAVEL IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR STRUCTURAL FILL.
- ALL ITEMS CALLED FOR REMOVAL SHALL BE REMOVED TO FULL DEPTH INCLUDING ALL FOOTINGS, FOUNDATIONS, AND OTHER APPURTENANCES, EXCEPT AS SPECIFICALLY NOTED OTHERWISE.
- CLEAR AND GRUB VEGETATION SHALL INCLUDE REMOVAL OF GRASS, SHRUBS, AND UNDERBRUSH, REMOVAL OF ROOTS, ROUGH GRADING, INSTALLATION OF LOAM (IF APPLICABLE), FINE GRADING, SEEDING AND TURF ESTABLISHMENT BY THE CONTRACTOR.
- TREES DESIGNATED FOR REMOVAL SHALL BE TAGGED BY CONTRACTOR AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE STORAGE OF MATERIALS AND EQUIPMENT WILL BE PERMITTED AT LOCATIONS DESIGNATED BY OWNER OR OWNER'S REPRESENTATIVE. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- STRIP & STORE EXISTING TOPSOIL FOR LATER REUSE WHERE APPROPRIATE, AND AS NOTED ON PLAN, WITH APPROPRIATE EROSION AND SEDIMENT CONTROLS.
- LOAM / TOPSOIL DESIGNATED FOR REUSE AS GENERAL FILL SHALL BE BLENDED WITH SUITABLE BORROW MATERIAL AS SPECIFIED.
- THE CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN. CONTRACTOR SHALL INSTALL TREE PROTECTION BARRIER AFTER CLEARING UNDERBRUSH AND TAKE DUE CARE TO PREVENT INJURY TO TREES DURING CLEARING OPERATIONS.

ABBREVIATIONS

GENERAL

| | EXISTING | PROPOSED |
|------------|----------------------------|----------|
| PR. | PROPOSED | |
| EX. | EXISTING | |
| ADJ. | ADJUST | |
| BIT. CONC. | BITUMINOUS CONCRETE | |
| CONC. | CONCRETE (CEMENT CONCRETE) | |
| B. | BASELINE | |
| N.T.S. | NOT TO SCALE | |
| B.M. | BENCH MARK | |
| EXIST. | | EXISTING |
| (OR EX.) | | EXISTING |
| FDN | FOUNDATION | |
| PL | PROPERTY LINE | |
| PVMT | PAVEMENT | |
| REM | REMOVE | |
| R&R | REMOVE AND RESET | |
| R&D | REMOVE AND DISPOSE | |
| SB | STONE BOUND | |
| NIC | NOT IN CONTRACT | |
| FF | FINISHED FLOOR | |
| HMA | HOT MIX ASPHALT | |
| G.C. | GENERAL CONTRACTOR | |
| E.C. | ELECTRICAL CONTRACTOR | |
| P.C. | PLUMBING CONTRACTOR | |
| S/B/DH | STONE BOUND/ DRILL HOLE | |
| CLF | CHAIN LINK FENCE | |
| TEMP. | TEMPORARY | |
| TYP. | TYPICAL | |
| EQ | EQUIPMENT | |
| EP | EDGE OF PAVEMENT | |
| RL | ROOF LEADER | |
| L.O.W. | LIMIT OF WORK | |
| VIF | VERIFY IN FIELD | |
| TBM | TEMPORARY BENCHMARK | |
| TYP. | ALTERNATE | |
| FES | FLARED END SECTION | |
| VGC | VERTICAL GRANITE CURB | |
| | WF#A-42 | |

| | |
|------------|--------------------------------|
| WQU | WATER QUALITY UNIT |
| CB | CATCH BASIN |
| CI | CURB INLET |
| CIP | CAST IRON PIPE |
| CMP | CORRUGATED METAL PIPE |
| DI | DUCTILE IRON PIPE |
| HYD | HYDRANT |
| INV. ELEV. | INVERT ELEVATION |
| UP | UTILITY POLE |
| SMH | SEWER MANHOLE |
| WG | WATER GATE |
| HDPE | HIGH DENSITY POLYETHYLENE PIPE |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| DMH | DRAIN MANHOLE |
| CI | CAST IRON |
| OCS | OUTLET CONTROL STRUCTURE |
| VC | VITRIFIED CLAY PIPE |
| LP | LIGHT POLE |
| OHW | OVERHEAD WIRE |
| UPLP | UTILITY POLE WITH LIGHT |
| HH | HANDHOLE |
| GW | GARAGE WASTE |
| CO | CLEANOUT |
| LC | LEACHING CHAMBER |
| GV | GATE VALVE |
| GALV. | GALVANIZED |
| F&I | FURNISH & INSTALL |
| BGS | BELOW GRADE SURFACE |

UTILITIES

| | |
|--------|--------|
| UF&B# | UF&B# |
| ULT# | ULT# |
| UPDL# | UPDL# |
| UPL# | UPL# |
| | |
| B° | B° |
| SAWCUT | SAWCUT |
| SF | SF |
| LOW | LOW |

ALIGNMENT/GRADING

| | |
| --- | --- |
| ME | MATCH EXISTING |

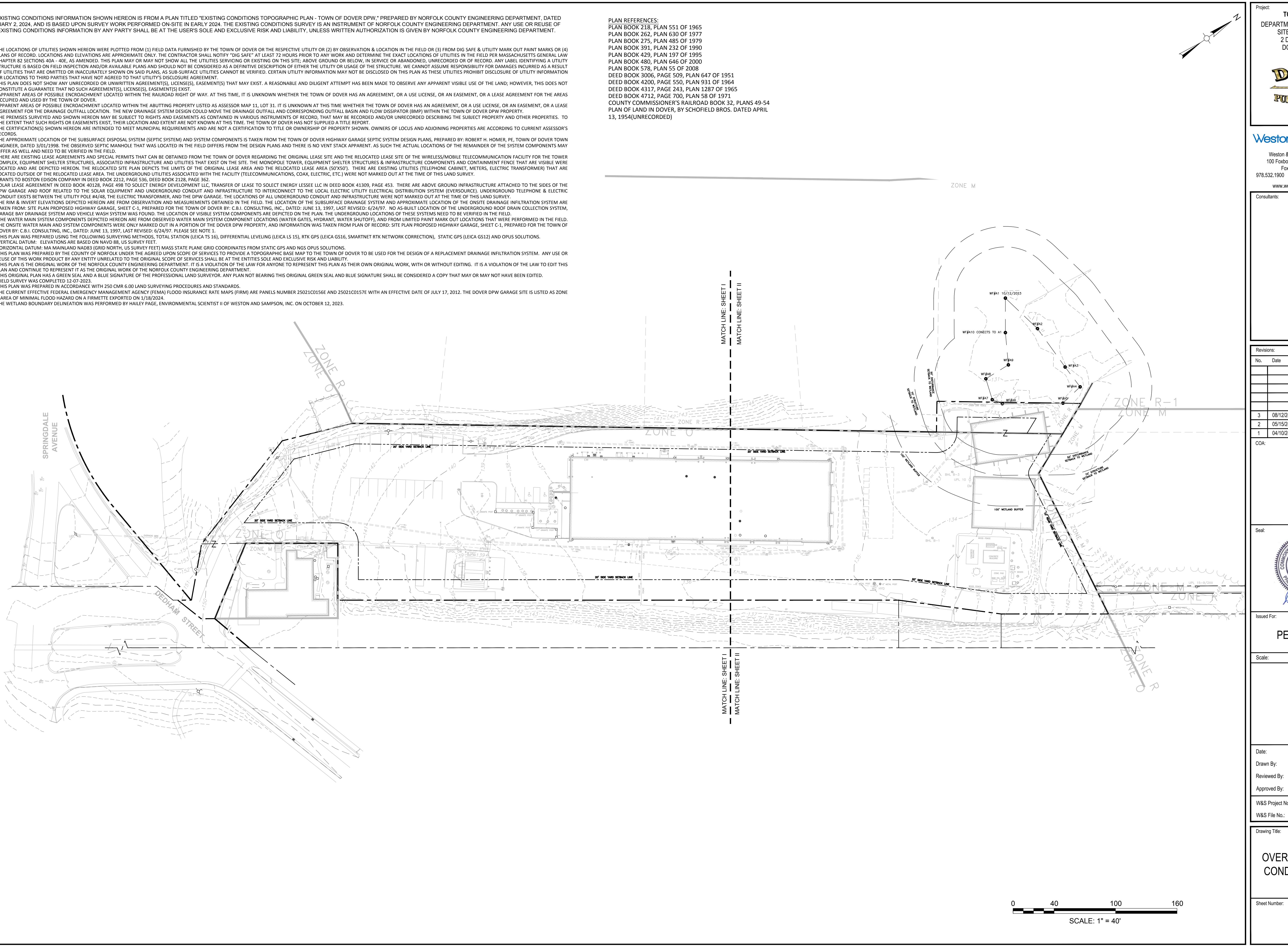
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THE EXISTING CONDITIONS INFORMATION SHOWN HEREON IS FROM A PLAN TITLED "EXISTING CONDITIONS TOPOGRAPHIC PLAN - TOWN OF DOVER DPW," PREPARED BY NORFOLK COUNTY ENGINEERING DEPARTMENT, DATED FEBRUARY 2, 2024, AND IS BASED UPON SURVEY WORK PERFORMED ON-SITE IN EARLY 2024. THE EXISTING CONDITIONS SURVEY IS AN INSTRUMENT OF NORFOLK COUNTY ENGINEERING DEPARTMENT. ANY USE OR REUSE OF THIS EXISTING CONDITIONS INFORMATION BY ANY PARTY SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, UNLESS WRITTEN AUTHORIZATION IS GIVEN BY NORFOLK COUNTY ENGINEERING DEPARTMENT.

NOTES:

- THE LOCATIONS OF UTILITIES SHOWN HEREON WERE PLOTTED FROM (1) FIELD DATA FURNISHED BY THE TOWN OF DOVER OR THE RESPECTIVE UTILITY OR (2) BY OBSERVATION & LOCATION IN THE FIELD OR (3) FROM DIG SAFE & UTILITY MARK OUT PAINT MARKS OR (4) PLANS OF RECORD. LOCATIONS AND ELEVATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY WORK AND DETERMINE THE EXACT LOCATIONS OF UTILITIES IN THE FIELD PER MASSACHUSETTS GENERAL LAW CHAPTER 82 SECTIONS 40A - 40E, AS AMENDED. THIS PLAN MAY OR MAY NOT SHOW ALL THE UTILITIES SERVICING OR EXISTING ON THIS SITE; ABOVE GROUND OR BELOW, IN SERVICE OR ABANDONED, UNRECORDED OR OF RECORD. ANY LABEL IDENTIFYING A UTILITY STRUCTURE IS BASED ON FIELD INSPECTION AND/OR AVAILABLE PLANS AND SHOULD NOT BE CONSIDERED AS A DEFINITIVE DESCRIPTION OF EITHER THE UTILITY OR USAGE OF THE STRUCTURE. WE ANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID PLANS, AS SUB-SURFACE UTILITIES CANNOT BE VERIFIED. CERTAIN UTILITY INFORMATION MAY NOT BE DISCLOSED ON THIS PLAN AS THESE UTILITIES PROHIBIT DISCLOSURE OF UTILITY INFORMATION OR USE OF THE INFORMATION. THE CONTRACTOR SHALL NOT BE LIABLE TO THE OWNER'S FOR DISCLOSURE AGREEMENT.
- THE PLAN DOES NOT SHOW ANY AGREEMENTS OR UNRECORDED EASEMENT(S), LICENSE(S), OR LEASE(S).
- APPARENT AREAS OF POSSIBLE ENCROACHMENT LOCATED WITHIN THE RAILROAD RIGHT OF WAY. AT THIS TIME, IT IS UNKNOWN WHETHER THE TOWN OF DOVER HAS AN AGREEMENT, OR A USE LICENSE, OR AN EASEMENT, OR A LEASE AGREEMENT FOR THE AREAS OCCUPIED AND USED BY THE TOWN OF DOVER.
- APPARENT AREAS OF POSSIBLE ENCROACHMENT LOCATED WITHIN THE ABUTTING PROPERTY LISTED AS ASSESSOR MAP 11, LOT 31. IT IS UNKNOWN AT THIS TIME WHETHER THE TOWN OF DOVER HAS AN AGREEMENT, OR A USE LICENSE, OR AN EASEMENT, OR A LEASE AGREEMENT FOR THE DRIVeway LOCATED ON THE NEIGHBORING PROPERTY. THE NEIGHBORING PROPERTY IS OWNED BY THE TOWN OF DOVER.
- THE SUBJECT SURFACE UTILITIES SHOWN HEREON MAY BE SUBJECT TO RIGHTS AND RESTRICTIONS AS CONTAINED IN VARIOUS INSTRUMENTS OF RECORD THAT MAY BE RECORDED AND/OR UNRECORDED DESCRIBING THE SUBJECT PROPERTY AND OTHER PROPERTIES. TO THE EXTENT THAT SUCH RIGHTS OR EASEMENTS EXIST, THEIR LOCATION AND EXTENT ARE NOT KNOWN AT THIS TIME. THE TOWN OF DOVER HAS NOT SUPPLIED A TITLE REPORT.
- THE CERTIFICATION(S) SHOWN HEREON ARE INTENDED TO MEET MUNICIPAL REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF LOCUS AND ADJOINING PROPERTIES ARE ACCORDING TO CURRENT ASSESSOR'S RECORDS.
- THE APPROXIMATE LOCATION OF THE SUBSURFACE DISPOSAL SYSTEM (SEPTIC SYSTEM) AND SYSTEM COMPONENTS IS TAKEN FROM THE TOWN OF DOVER HIGHWAY GARAGE SEPTIC SYSTEM DESIGN PLANS, PREPARED BY: ROBERT H. HOMER, PE, TOWN OF DOVER TOWN ENGINEER, DATED 3/01/1998. THE OBSERVED SEPTIC MANHOLE THAT WAS LOCATED IN THE FIELD DIFFERS FROM THE DESIGN PLANS AND THERE IS NO VENT STACK APPARENT. AS SUCH THE ACTUAL LOCATIONS OF THE REMAINDER OF THE SYSTEM COMPONENTS MAY DIFFER FROM THE DESIGN PLANS.
- THERE ARE EXISTING LEASE AGREEMENTS AND SPECIAL PERMITS THAT CAN BE OBTAINED FROM THE TOWN OF DOVER REGARDING THE ORIGINAL LEASE SITE AND THE RELOCATED LEASE SITE OF THE WIRELESS/MOBILE TELECOMMUNICATION FACILITY FOR THE TOWER COMPLEX, EQUIPMENT SHELTER STRUCTURES, ASSOCIATED INFRASTRUCTURE AND UTILITIES THAT EXIST ON THE SITE. THE MONOPOLY TOWER, EQUIPMENT SHELTER STRUCTURES & INFRASTRUCTURE COMPONENTS AND CONTAINMENT FENCE THAT ARE VISIBLE WERE LOCATED AND ARE DEPICTED HEREON. THE RELOCATED SITE PLAN DEPICTS THE LIMITS OF THE ORIGINAL LEASE AREA AND THE RELOCATED LEASE AREA (50'X50'). THERE ARE EXISTING UTILITIES (TELEPHONE CABINET, METERS, ELECTRIC TRANSFORMER) THAT ARE LOCATED OUTSIDE OF THE RELOCATED LEASE AREA. THE UNDERGROUND UTILITIES ASSOCIATED WITH TELECOMMUNICATIONS, COAX, ELECTRIC, ETC.) WERE NOT MARKED OUT AT THE TIME OF THIS LAND SURVEY.
- GRANTS TO BOSTON EDISON COMPANY IN DEED BOOK 2212, PAGE 536, DEED BOOK 2128, PAGE 362.
- SOME UTILITIES SHOWN HEREON ARE FROM THE DESIGN PLANS OF THE TOWN OF DOVER. THE TRANSFER OF LEASE TO SELECT ENERGY LESSEE LLC IN DEED BOOK 41300, PAGE 453. THERE ARE ABOVE GROUND INFRASTRUCTURE ATTACHED TO THE SIDES OF THE DPW GARAGE AND ROOF RELATED TO THE SOLAR EQUIPMENT AND UNDERGROUND CONDUIT AND INFRASTRUCTURE TO INTERCONNECT TO THE LOCAL ELECTRIC UTILITY ELECTRICAL DISTRIBUTION SYSTEM (EVOSOURCE). UNDERGROUND TELEPHONE & ELECTRIC CONDUIT EXISTS BETWEEN THE UTILITY POLE M4/48, THE ELECTRIC TRANSFORMER, AND THE DPW GARAGE. THE LOCATIONS OF ALL UNDERGROUND CONDUIT AND INFRASTRUCTURE WERE NOT MARKED OUT AT THE TIME OF THIS LAND SURVEY.
- THE RIM & INVERT ELEVATIONS DEPICTED HEREON ARE FROM OBSERVATION AND MEASUREMENTS OBTAINED IN THE FIELD. THE LOCATION OF THE SUBSURFACE DRAINAGE SYSTEM AND APPROXIMATE LOCATION OF THE ON-SITE DRAINAGE INFILTRATION SYSTEM ARE TAKEN FROM: SITE PLAN PROPOSED HIGHWAY GARAGE, SHEET C-1, PREPARED FOR THE TOWN OF DOVER BY: C.B.I. CONSULTING, INC., DATED: JUNE 13, 1997, LAST REVISED: 6/24/97. NO AS-BUILT LOCATION OF THE UNDERGROUND ROOF DRAIN COLLECTION SYSTEM, GARAGE BAY DRAINAGE SYSTEM AND VEHICLE WASH SYSTEM WAS FOUND. THE LOCATION OF VISIBLE SYSTEM COMPONENTS ARE DEPICTED ON THE PLAN. THE UNDERGROUND LOCATIONS OF THESE SYSTEMS NEED TO BE VERIFIED IN THE FIELD.
- THE WATER MAIN SYSTEM COMPONENTS DEPICTED HEREON ARE FROM OBSERVED WATER MAIN SYSTEM COMPONENT LOCATIONS (WATER GATES, HYDRANT, WATER SHUTOFF), AND FROM LIMITED PAINT MARK OUT LOCATIONS THAT WERE PERFORMED IN THE FIELD. THE WATER MAIN SYSTEM COMPONENTS DEPICTED HEREON ARE FROM OBSERVED WATER MAIN SYSTEM COMPONENT LOCATIONS (WATER GATES, HYDRANT, WATER SHUTOFF), AND FROM LIMITED PAINT MARK OUT LOCATIONS THAT WERE PERFORMED IN THE FIELD.
- THIS PLAN WAS PREPARED USING THE FOLLOWING SURVEYING METHODS, TOTAL STATION (LEICA TS 16), DIFFERENTIAL LEVELING (LEICA GS16, SMARTNET RTK NETWORK CORRECTION), STATIC GPS (LEICA GS12) AND OPUS SOLUTIONS.
- VERTICAL DATUM: ELEVATIONS ARE BASED ON NAVD 88, US SURVEY FEET.
- HORIZONTAL DATUM: MA MAINLAND NAD83 (GRS 1980, US SURVEY FEET) MASS STATE PLANE GRCS COORDINATES FROM STATIC GPS AND NGS OPUS SOLUTIONS.
- THIS PLAN WAS PREPARED BY THE COUNTY OF NORFOLK UNDER THE AGREED UPON SCOPE OF SERVICES TO PROVIDE A TOPOGRAPHIC BASE MAP TO THE TOWN OF DOVER TO BE USED FOR THE DESIGN OF A REPLACEMENT DRAINAGE INFILTRATION SYSTEM. ANY USE OR REUSE OF THIS WORK IS SUBJECT TO THE AGREED UPON SCOPE OF SERVICES AND THE CONTRACTOR'S SOLE AND EXCLUSIVE RISK AND LIABILITY.
- THIS PLAN IS NOT THE ORIGINAL WORK OF THE NORFOLK COUNTY ENGINEERING DEPARTMENT. IT IS A VIOLATION OF THE LAW FOR ANYONE TO REPRESENT THIS PLAN AS THEIR OWN ORIGINAL WORK, WITH OR WITHOUT EDITING. IT IS A VIOLATION OF THE LAW TO EDIT THIS PLAN AND CONTINUE TO REPRESENT IT AS THE ORIGINAL WORK OF THE NORFOLK COUNTY ENGINEERING DEPARTMENT.
- THIS ORIGINAL PLAN HAS A GREEN SEAL AND A BLUE SIGNATURE OF THE PROFESSIONAL LAND SURVEYOR. ANY PLAN NOT BEARING THIS ORIGINAL GREEN SEAL AND BLUE SIGNATURE SHALL BE CONSIDERED A COPY THAT MAY OR MAY NOT HAVE BEEN EDITED.
- FIELD SURVEY WAS COMPLETED 12-07-2023.
- THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH 250 CMR 6.00 LAND SURVEYING PROCEDURES AND STANDARDS.
- THE CURRENT EFFECTIVE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) ARE PANELS NUMBER 25021C0156E AND 25021C0157E WITH AN EFFECTIVE DATE OF JULY 17, 2012. THE DOVER DPW GARAGE SITE IS LISTED AS ZONE X, AREA OF MINIMAL FLOOD HAZARD ON A FIRMETTE EXPORTED ON 1/18/2024.
- THE WETLAND BOUNDARY DELINEATION WAS PERFORMED BY HAILEY PAGE, ENVIRONMENTAL SCIENTIST II OF WESTON AND SAMPSON, INC. ON OCTOBER 12, 2023.

PLAN REFERENCES:
 PLAN BOOK 218, PLAN 551 OF 1965
 PLAN BOOK 262, PLAN 630 OF 1977
 PLAN BOOK 275, PLAN 485 OF 1979
 PLAN BOOK 391, PLAN 232 OF 1990
 PLAN BOOK 429, PLAN 197 OF 1995
 PLAN BOOK 480, PLAN 646 OF 2000
 PLAN BOOK 578, PLAN 55 OF 2008
 DEED BOOK 3006, PAGE 509, PLAN 647 OF 1951
 DEED BOOK 4200, PAGE 550, PLAN 931 OF 1964
 DEED BOOK 4317, PAGE 243, PLAN 1287 OF 1965
 DEED BOOK 4712, PAGE 700, PLAN 58 OF 1971
 COUNTY COMMISSIONER'S RAILROAD BOOK 32, PLANS 49-54
 PLAN OF LAND IN DOVER, BY SCHOFIELD BROS. DATED APRIL 13, 1954 (UNRECORDED)



Project:
TOWN OF DOVER
 DEPARTMENT OF PUBLIC WORKS
 SITE IMPROVEMENTS
 2 DEEDHAM STREET
 DOVER, MA 02030



Weston & Sampson

Weston & Sampson Engineers, Inc.
 100 Foxborough Boulevard, Suite 250
 Foxborough, MA 02035
 978.532.1900 800.SAMPSON
 www.westonandsampson.com

Consultants:

| Revisions: | | |
|------------|----------|-------------------------------|
| No. | Date | Description |
| 3 | 08/12/24 | PERMITTING FUEL SYSTEM DESIGN |
| 2 | 05/15/24 | PER CONSERVATION FEEDBACK |
| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |

COA:



Issued For:

PERMITTING

Scale:

Date: APRIL 2024
 Drawn By:
 Reviewed By:
 Approved By:
 W&S Project No.: ENG22-1087
 W&S File No.:

Drawing Title:

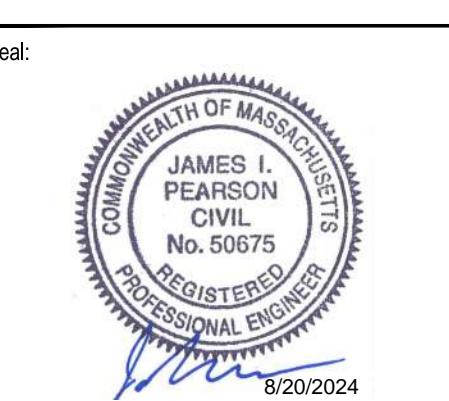
**OVERALL EXISTING
CONDITIONS PLAN**

Sheet Number:

C100



| Revisions: | | |
|------------|----------|-------------------------------|
| No. | Date | Description |
| 3 | 08/12/24 | PERMITTING FUEL SYSTEM DESIGN |
| 2 | 05/15/24 | PER CONSERVATION FEEDBACK |
| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |

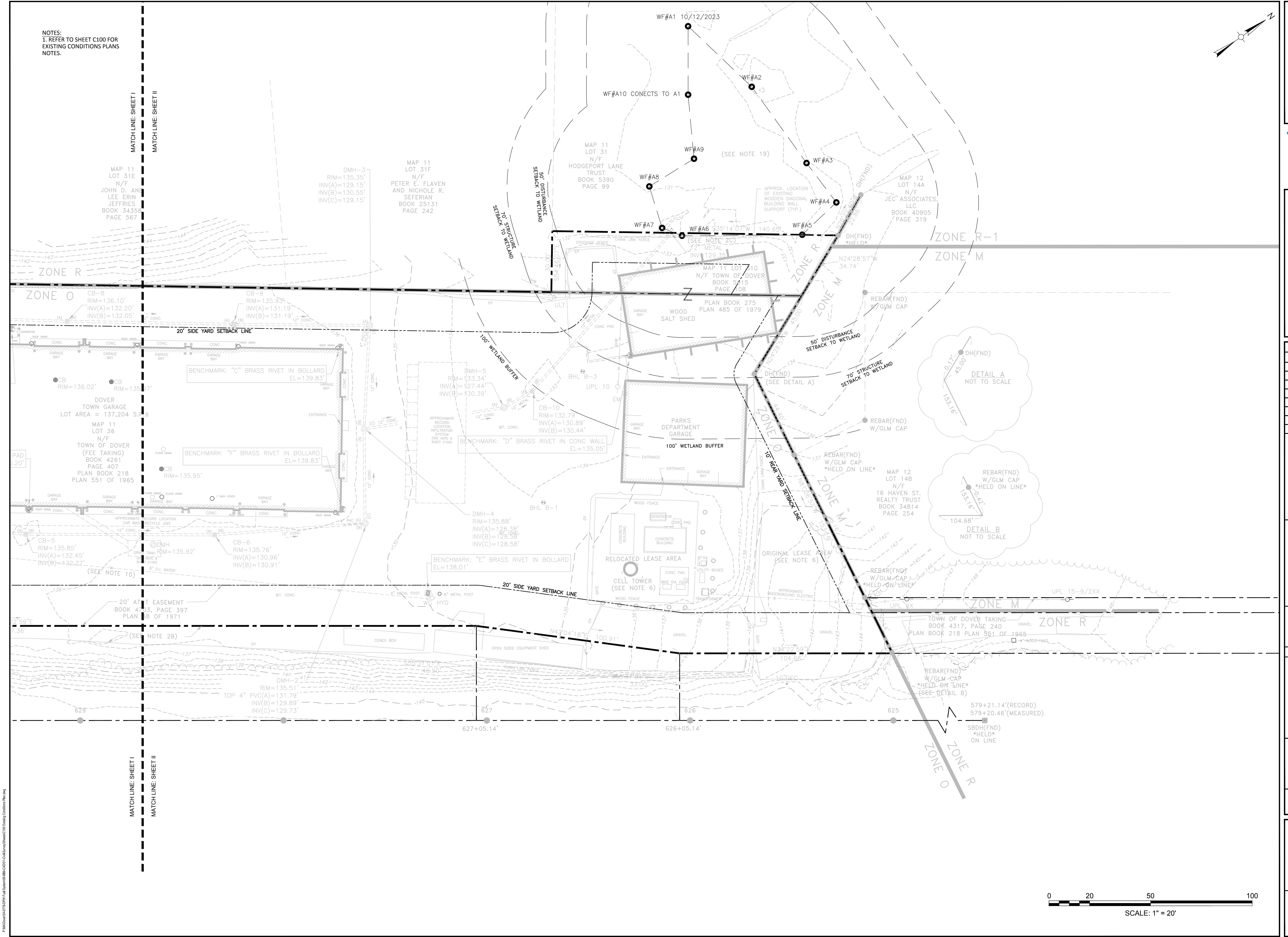


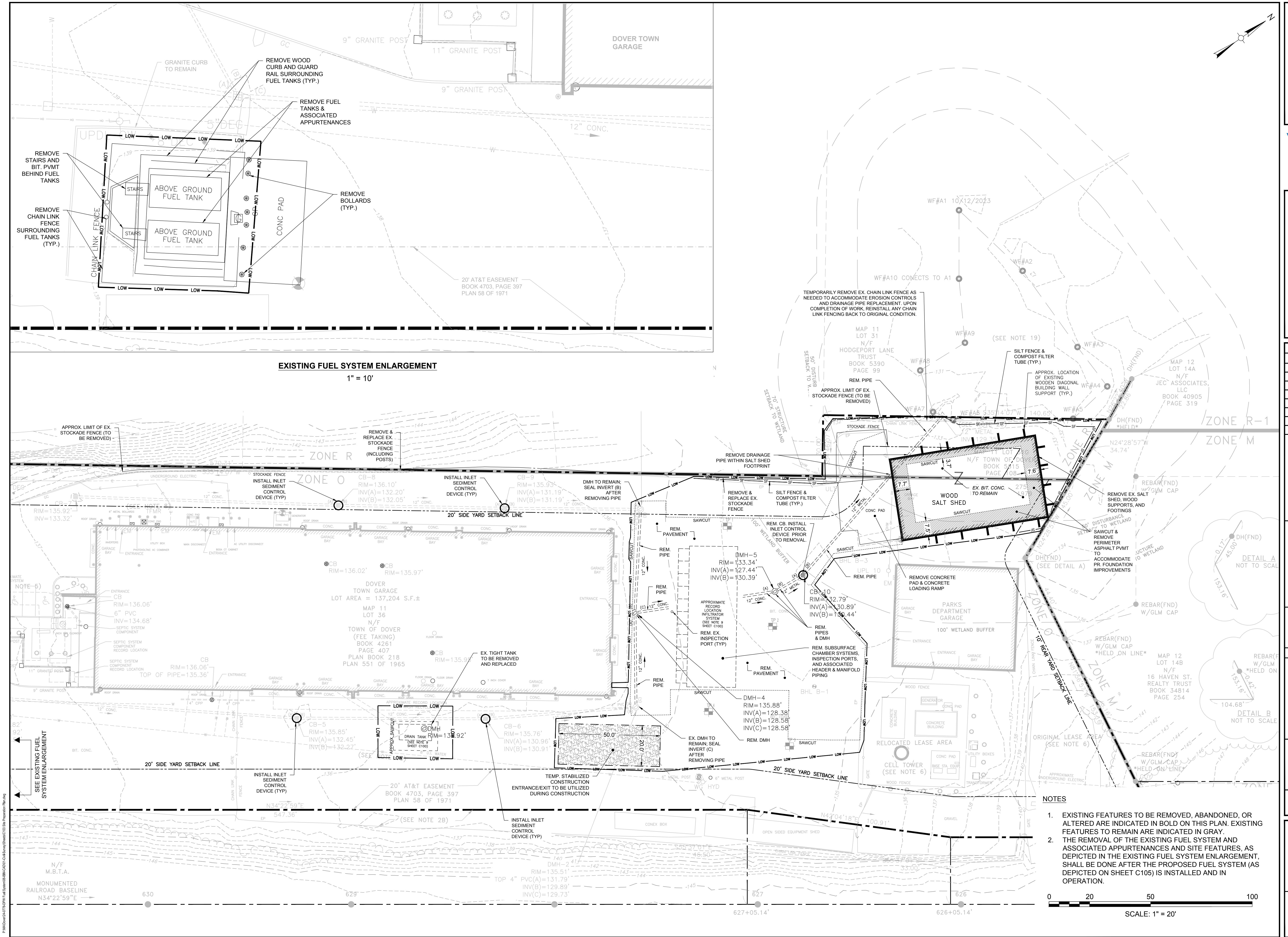
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| Date: | APRIL 2024 |
| Drawn By: | |
| Reviewed By: | |
| Approved By: | |
| W&S Project No.: | ENG22-1087 |
| W&S File No.: | |

EXISTING
CONDITIONS
PLAN II

C102



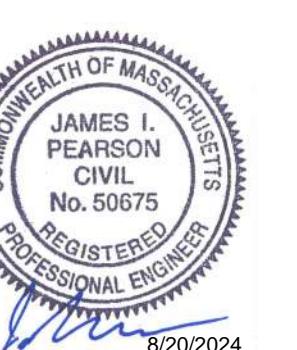


The logo for Weston & Sampson Engineers, Inc. It features the word "Weston" in blue, the ampersand "&" in green, and "Sampson" in green. A blue circle surrounds the ampersand. A small "SM" is in the top right corner of the green text.

consultants:

| Revisions: | | |
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| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |

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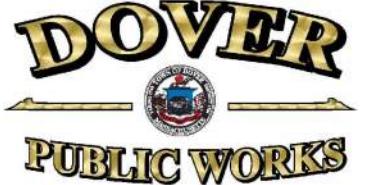
Digitized by srujanika@gmail.com

Date: APRIL 2024
Drawn By:
Reviewed By:
Approved By:
W&S Project No.: ENG22-1087

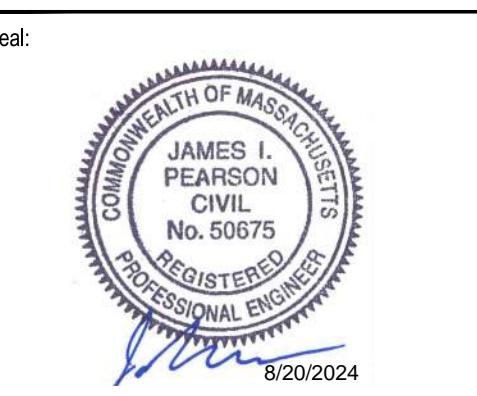
Digitized by srujanika@gmail.com

SITE PREPARATION PLAN

10 of 10 pages



| Revisions: | | |
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| No. | Date | Description |
| 3 | 08/12/24 | PERMITTING FUEL SYSTEM DESIGN |
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| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |



PERMITTING

PROPOSED SITE PLAN

C104

DIMENSIONAL REQUIREMENTS

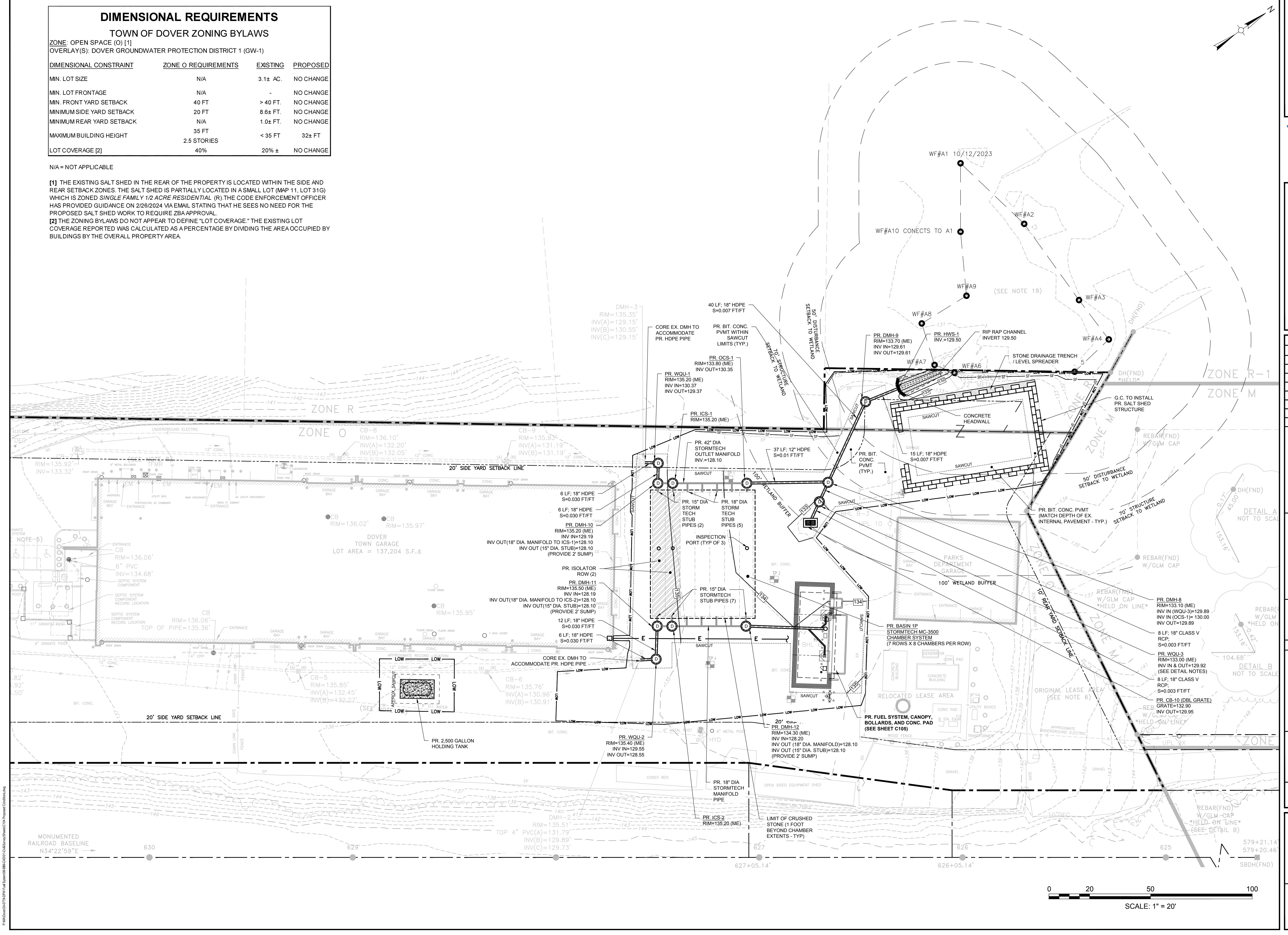
TOWN OF DOVER ZONING BYLAWS

| DIMENSIONAL CONSTRAINT | ZONE O REQUIREMENTS | EXISTING | PROPOSED |
|---------------------------|---------------------|----------|-----------|
| MIN. LOT SIZE | N/A | 3.1± AC. | NO CHANGE |
| MIN. LOT FRONTAGE | N/A | - | NO CHANGE |
| MIN. FRONT YARD SETBACK | 40 FT | > 40 FT. | NO CHANGE |
| MINIMUM SIDE YARD SETBACK | 20 FT | 8.6 FT. | NO CHANGE |
| MINIMUM REAR YARD SETBACK | N/A | 1.0± FT. | NO CHANGE |
| MAXIMUM BUILDING HEIGHT | 35 FT | < 35 FT | 32± FT |
| LOT COVERAGE [2] | 2.5 STORIES | < 35 FT | 32± FT |
| | 40% | 20% ± | NO CHANGE |

N/A = NOT APPLICABLE

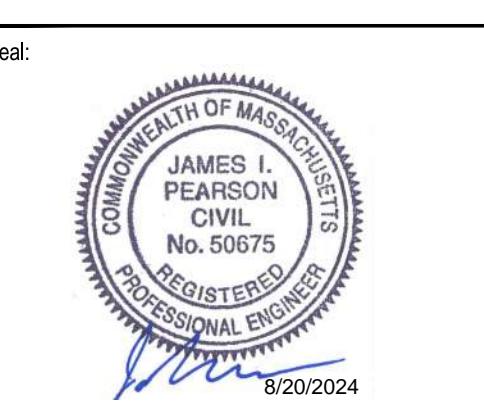
[1] THE EXISTING SALT SHED IN THE REAR OF THE PROPERTY IS LOCATED WITHIN THE SIDE AND REAR SETBACK ZONES. THE SALT SHED IS PARTIALLY LOCATED IN A SMALL LOT (MAP 11, LOT 31G) WHICH IS ZONED SINGLE FAMILY 1/2 ACRE RESIDENTIAL (R). THE CODE ENFORCEMENT OFFICER HAS PROVIDED GUIDANCE ON 2/26/2024 VIA EMAIL STATING THAT HE SEES NO NEED FOR THE PROPOSED SALT SHED WORK TO REQUIRE ZBA APPROVAL.

[2] THE ZONING BYLAWS DO NOT APPEAR TO DEFINE "LOT COVERAGE." THE EXISTING LOT COVERAGE REPORTED WAS CALCULATED AS A PERCENTAGE BY DIVIDING THE AREA OCCUPIED BY BUILDINGS BY THE OVERALL PROPERTY AREA.



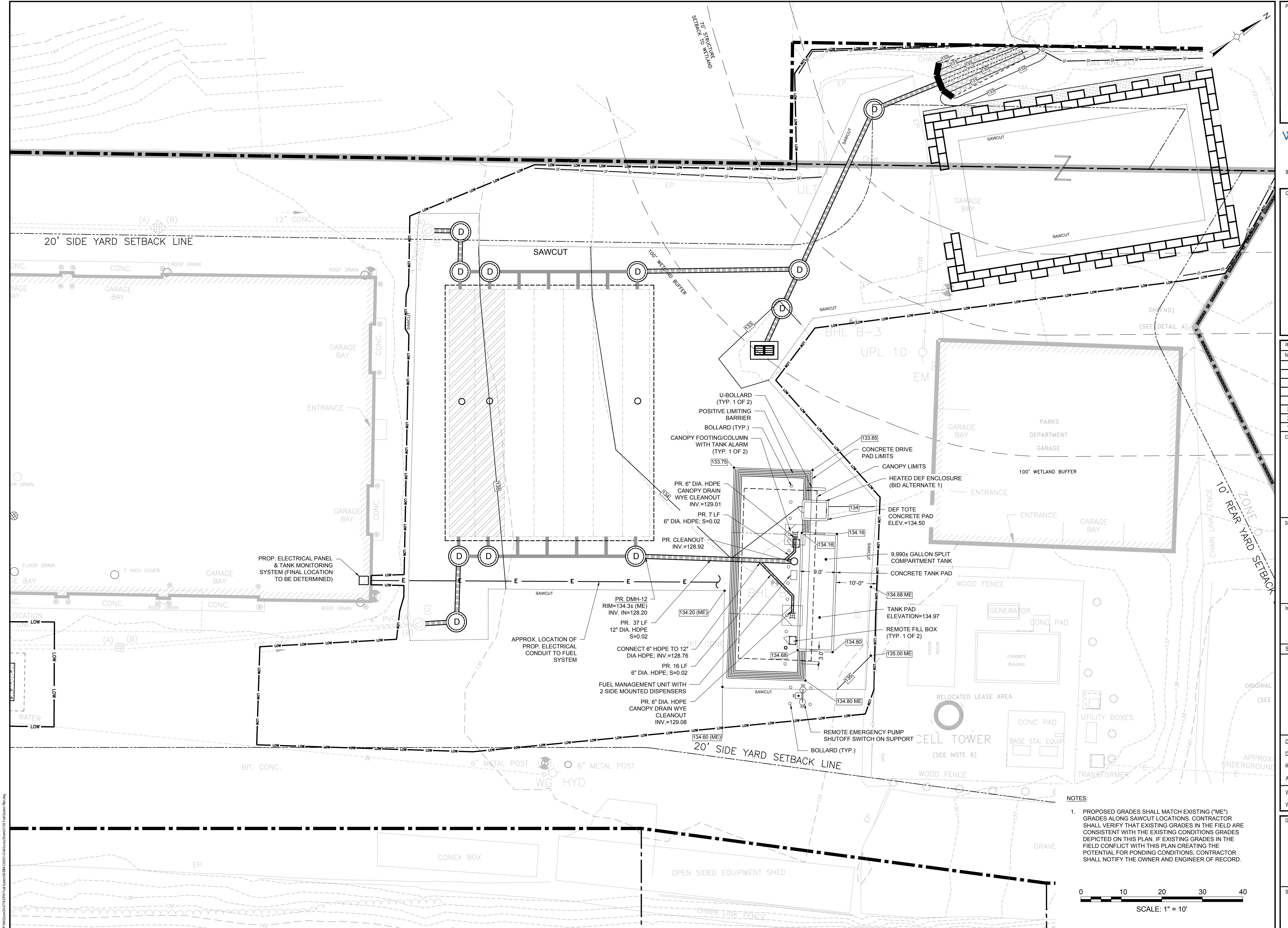


| Revisions: | | |
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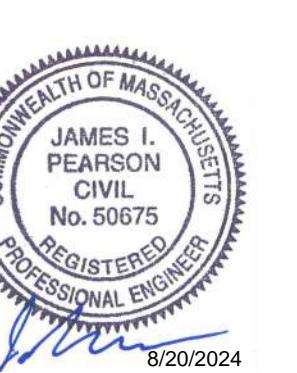
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| Date: | APRIL 2024 |
| Drawn By: | |
| Reviewed By: | |
| Approved By: | |
| W&S Project No.: | ENG22-1087 |
| W&S File No.: | |

PROPOSED FUEL SYSTEM PLAN





| Revisions: | | |
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| No. | Date | Description |
| | | |
| 3 | 08/12/24 | PERMITTING FUEL SYSTEM DESIGN |
| 2 | 05/15/24 | PER CONSERVATION FEEDBACK |
| 1 | 04/10/24 | LOCAL PERMIT APPLICATIONS |

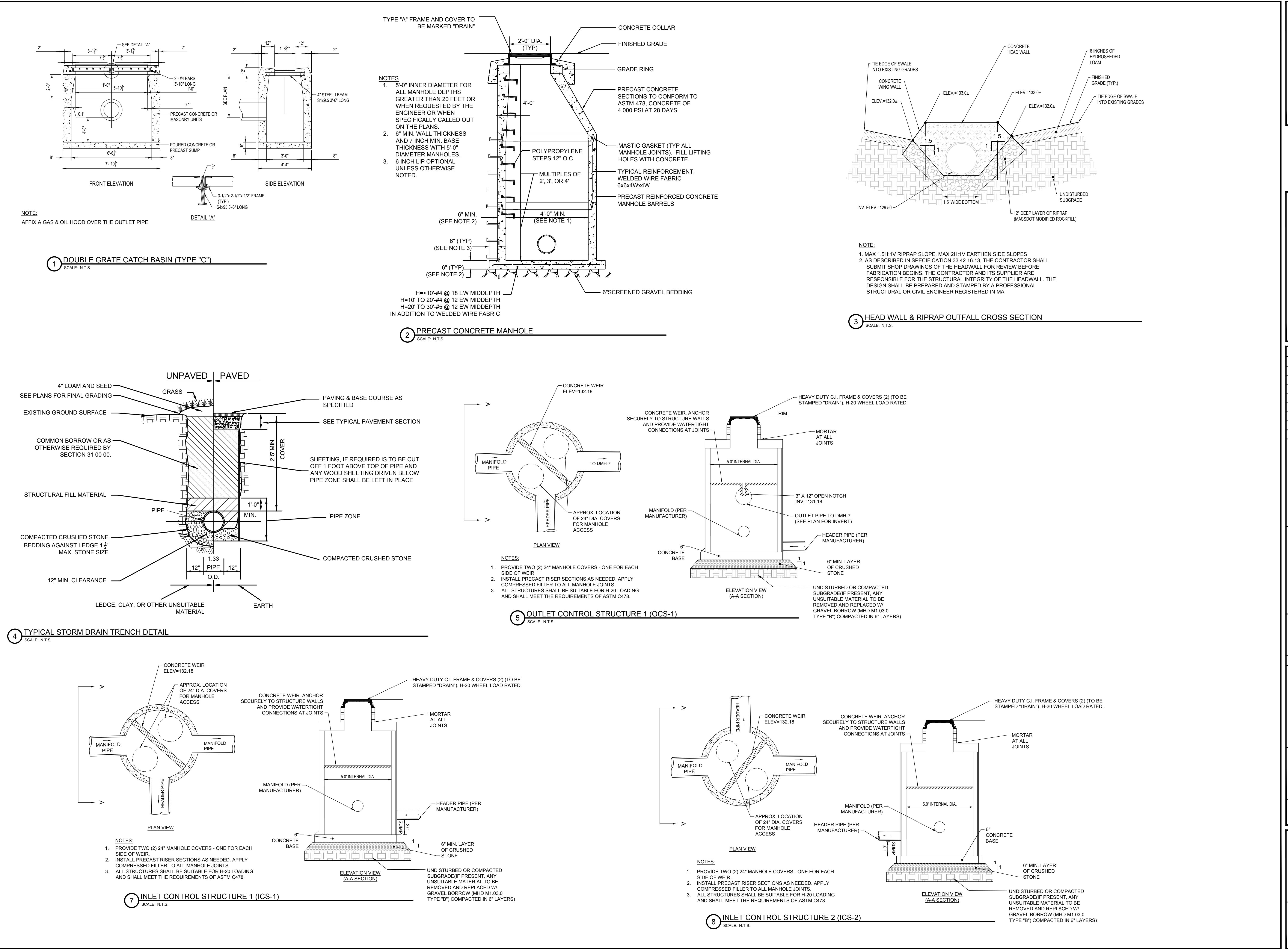


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| W&S Project No.: | ENG22-1087 |
| W&S File No.: | |

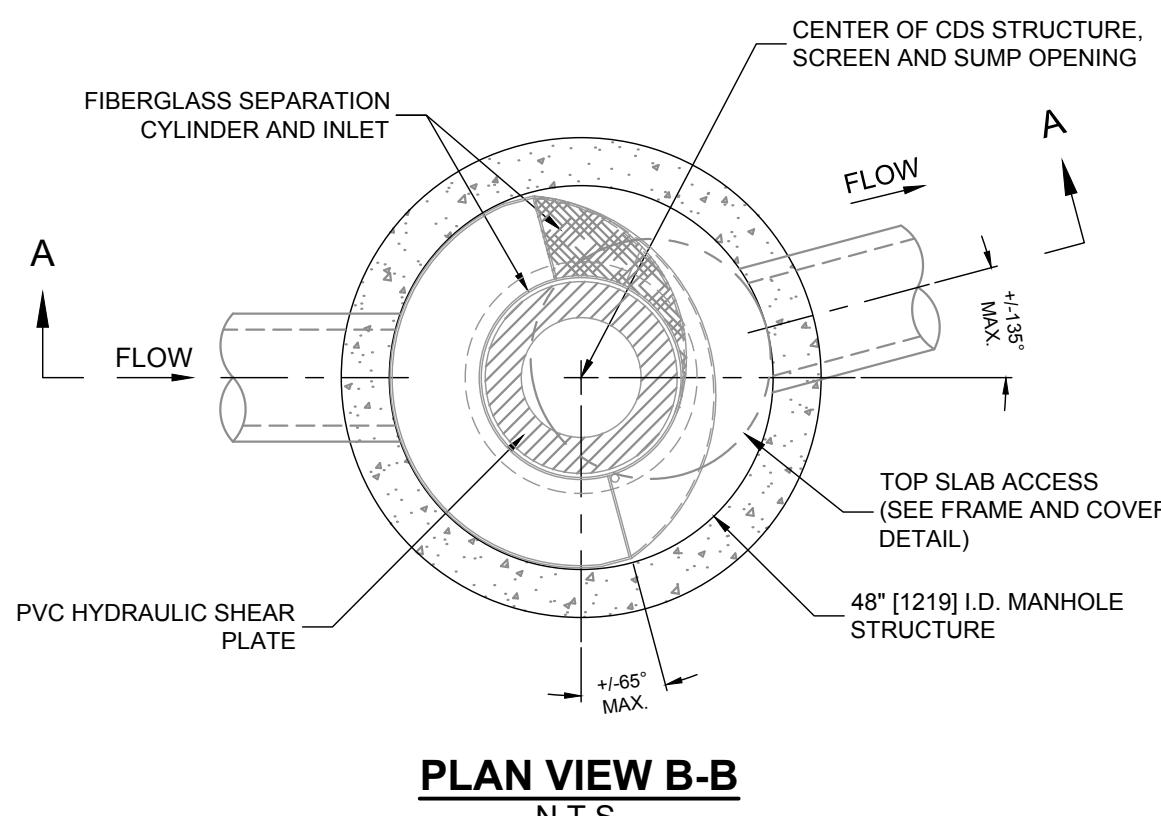
DETAILS II

C502





Consultants:

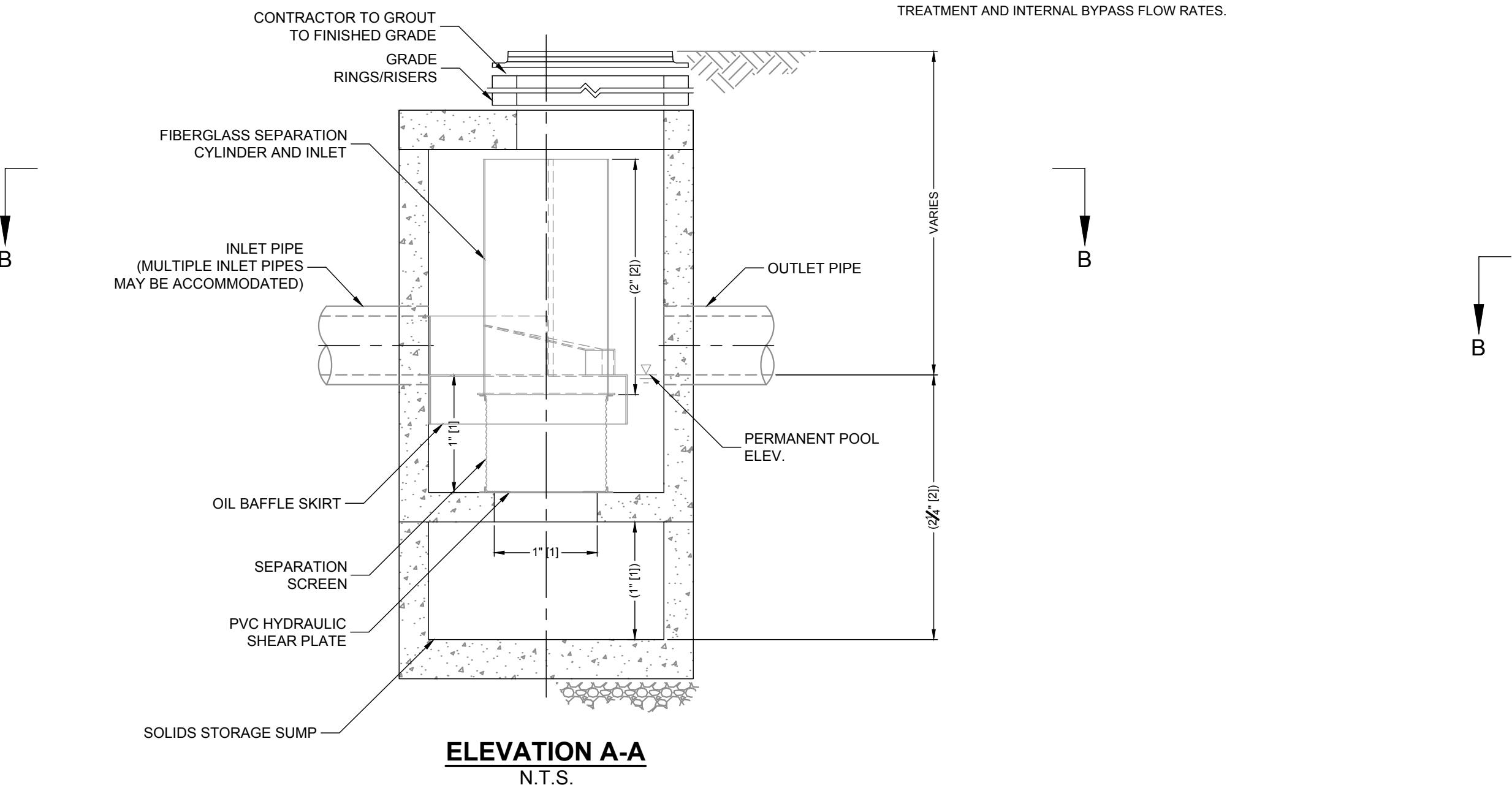


PLAN VIEW B-B
N.T.S.

GENERAL NOTES:
1. CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE: www.contechcs.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
4. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
5. CDS STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0'-2", AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. IF PROVIDED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES:
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

PERFORMANCE NOTE:
1. REFER TO SPECIFICATION 33 44 19.13 FOR REQUIRED TREATMENT AND INTERNAL BYPASS FLOW RATES.



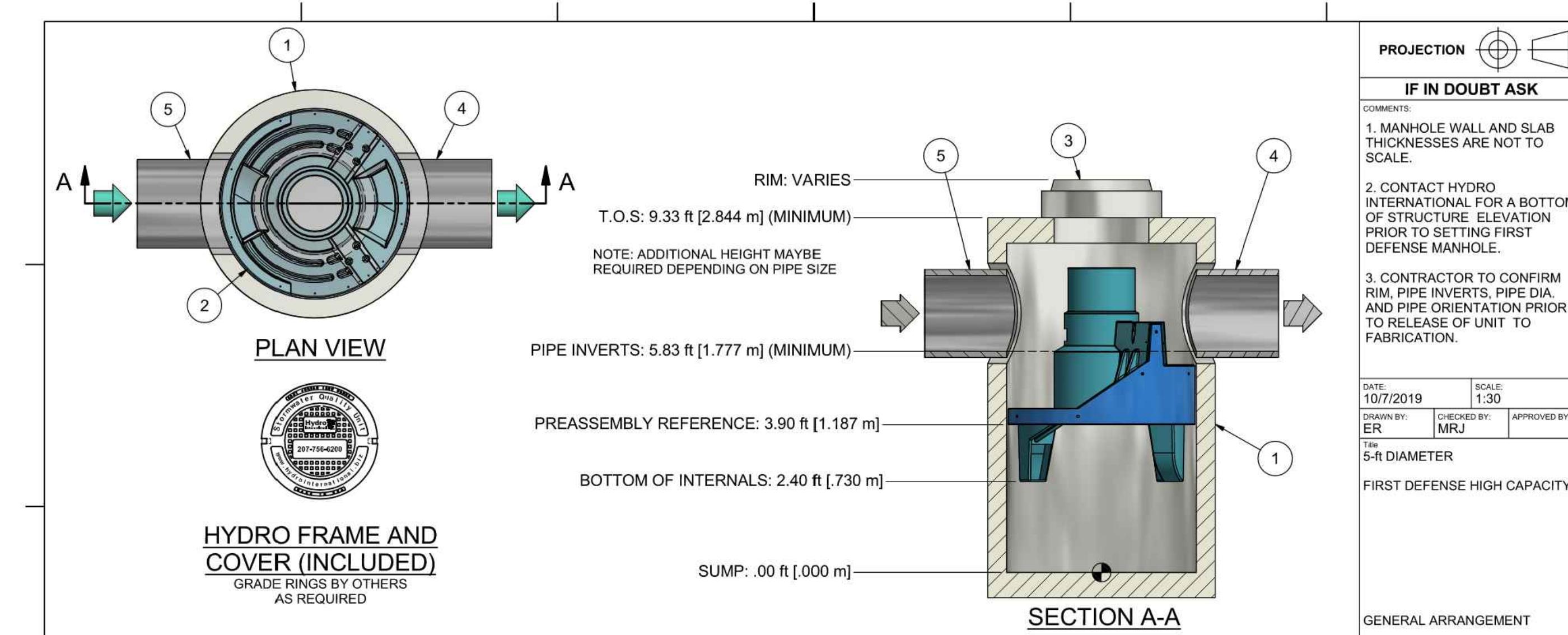
ELEVATION A-A
N.T.S.

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

3 WQU-1 (CONTECH CDS 2015-4)

SCALE: N.T.S.



HYDRO FRAME AND COVER (INCLUDED)

GRADE RINGS BY OTHERS AS REQUIRED

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 20.0 cfs (566 l/s)
2. Min Sediment Storage Capacity: 1.1 cu. yd. (0.8 cu. m.)
3. Oil Storage Capacity: 300 gal. (1135 liters)
4. Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm)
5. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
6. For more product information including regulatory acceptances, please visit <https://hydro-intl.com/en/products/first-defense>

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 24".
3. Multiple inlet pipes are possible (refer to project plan/s).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan/s).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT. ACCORDINGLY, HYDRO INTERNATIONAL CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT OTHER THAN THE PERFORMANCE thereof. THE DESIGNER, BUILDER, AND OWNER OF ANY EQUIPMENT SUBJECT TO THIS DRAWING, WHETHER IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.

NOTES:

1. DUE TO THE LIMITED RIM-TO-INVERT DISTANCE PROPOSED AT WQU-3, THE CONTRACTOR SHALL CONTACT HYDRO INTERNATIONAL FOR SPECIAL INSTALLATION GUIDANCE AND SHALL SUBMIT A SHOP DRAWING FOR THE ENGINEER'S REVIEW PRIOR TO INSTALLATION. THE TOP SLAB SHALL BE INSTALLED FLUSH AT GRADE WITH THE MANHOLE COVER.
2. REFER TO SPECIFICATION 33 44 19.13 FOR REQUIRED TREATMENT AND INTERNAL BYPASS FLOW RATES.

| PARTS LIST | | | | | | | | | |
|------------|-----|-----------|-----------|--|--|--|--|--|--|
| ITEM | QTY | SIZE (in) | SIZE (mm) | DESCRIPTION | | | | | |
| | | | | DO NOT SCALE DRAWING STEEL FABRICATION TOLERANCES ALL DIMENSIONS ARE IN INCHES | | | | | |
| 1 | 1 | 60 | 1500 | I.D. PRECAST MANHOLE | | | | | |
| 2 | 1 | | | INTERNAL COMPONENTS (PRE-INSTALLED) | | | | | |
| 3 | 1 | 30 | 750 | FRAME AND COVER (ROUND) | | | | | |
| 4 | 1 | 24 (MAX) | 600 (MAX) | OUTLET PIPE (BY OTHERS) | | | | | |
| 5 | 1 | 24 (MAX) | 600 (MAX) | INLET PIPE (BY OTHERS) | | | | | |

DO NOT SCALE DRAWING
STEEL FABRICATION TOLERANCES
ALL DIMENSIONS ARE IN INCHES

ITEM NO. 000-1200 = ±1" 000-1200 = ±0.5" 000-2400 = ±0.25" 000-2400 = ±0.125" 000-3600 = ±0.125" 000-3600 = ±0.0625"

1. I.D. PRECAST MANHOLE
2. INTERNAL COMPONENTS (PRE-INSTALLED)
3. FRAME AND COVER (ROUND)
4. OUTLET PIPE (BY OTHERS)
5. INLET PIPE (BY OTHERS)

WEIGHT: N/A MATERIAL: STOCK NUMBER: DRAWING NO: FDHC GA-5

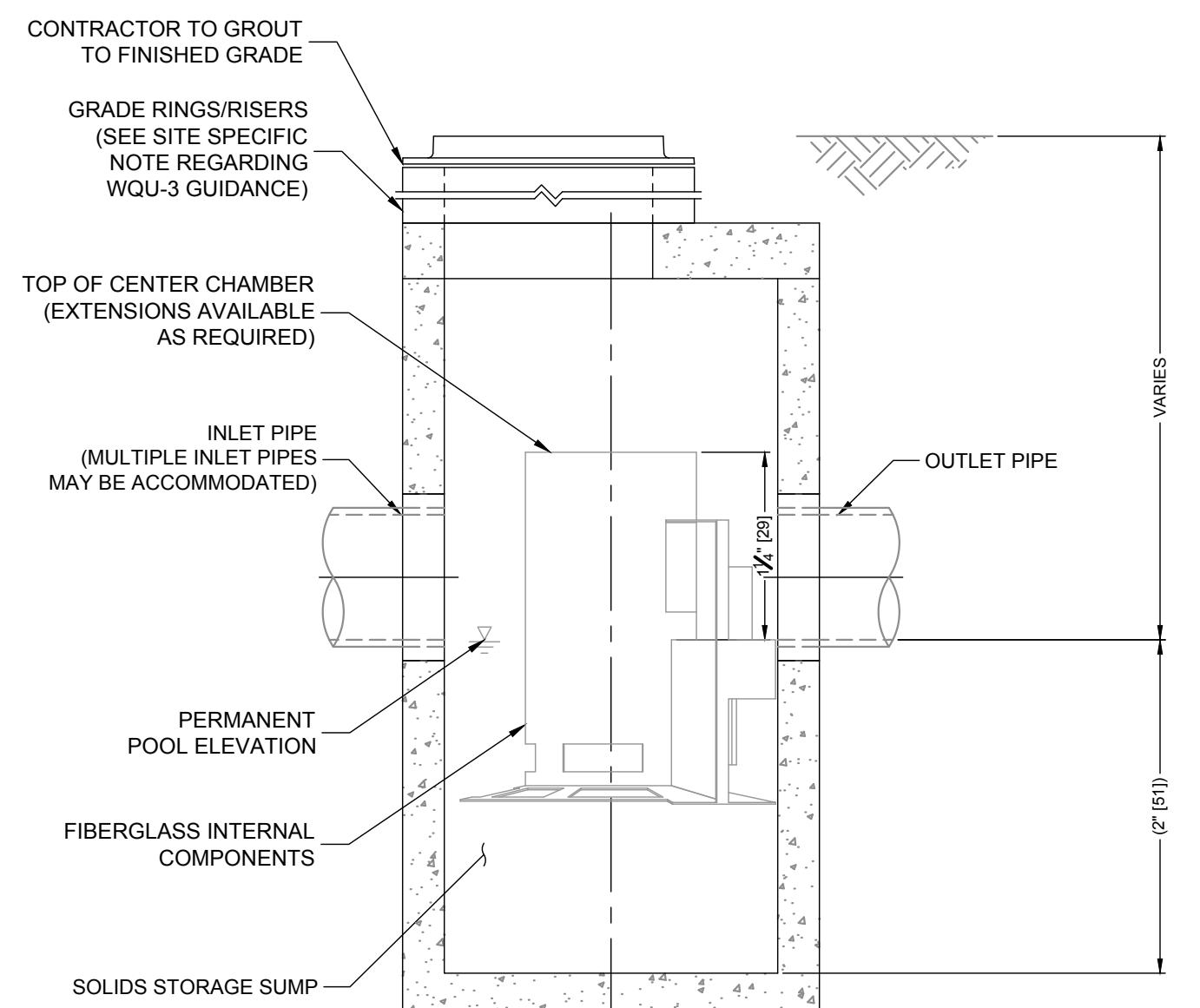
SHEET SIZE: SHEET B OF 1 Rev: -

| First Defense® High Capacity Model Number | Diameter | Typical TSS Treatment Flow Rates | | | Peak Online Flow Rate | Maximum Pipe Diameter ¹ | Oil Storage Capacity | Typical Sediment Storage Capacity ² | Minimum Distance from Outlet Invert to Top of Rim ³ | Standard Distance from Outlet Invert to Sump Floor |
|---|-------------|----------------------------------|--------------|-------------|-----------------------|------------------------------------|----------------------|--|--|--|
| | | (ft / m) | (cfs / L/s) | (cfs / L/s) | | | | | | |
| FD-3HC | 3' 0" / 0.9 | 0.84 / 23.7 | 1.06 / 42.4 | 15 / 424 | 18 / 457 | 125 / 473 | 0.4 / 0.3 | 2.0 - 3.5 / 0.6 - 1.0 | 3.71 / 1.13 | |
| FD-4HC | 4' 1" / 1.2 | 1.50 / 42.4 | 1.88 / 53.2 | 19 / 510 | 24 / 590 | 191 / 723 | 0.7 / 0.4 | 2.3 - 3.9 / 0.7 - 2.2 | 4.97 / 1.5 | |
| FD-5HC | 5' 1" / 1.5 | 2.35 / 66.2 | 2.94 / 83.2 | 20 / 566 | 24 / 600 | 300 / 1135 | 1.1 / .84 | 2.5 - 4.5 / 0.7 - 1.3 | 5.19 / 1.15 | |
| FD-6HC | 6' 7" / 1.8 | 3.87 / 95.7 | 4.23 / 119.8 | 32 / 790 | 30 / 750 | 496 / 1787 | 1.67 / 1.1 | 3.0 - 5.1 / 0.9 - 1.6 | 5.97 / 1.18 | |
| FD-8HC | 8' 2" / 2.4 | 6.00 / 169.9 | 7.52 / 212.8 | 50 / 1415 | 48 / 1219 | 1120 / 4239 | 2.8 / 2.1 | 3.0 - 6.0 / 0.9 - 1.8 | 7.40 / 2.2 | |

¹Contact Hydro International when larger pipe sizes are required.
²Contact Hydro International when custom sediment storage capacity is required.
³Minimum distance for models depends on pipe diameter.

2 WQU-2 (HYDRO INTERNATIONAL FIRST DEFENSE (FDHC GA-5))

SCALE: N.T.S.



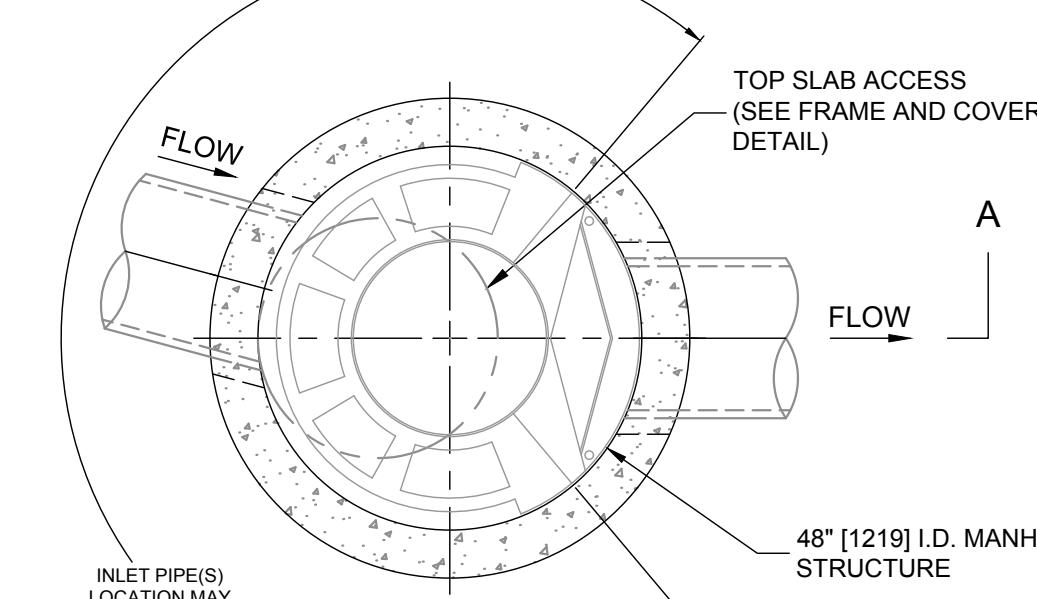
ELEVATION A-A
NOT TO SCALE

| CASCADE SEPARATOR DESIGN NOTES | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| RATED TREATMENT CAPACITY IS 2.0 CFS, OR PER LOCAL REGULATIONS. THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS. | | | | | | | | | |

4 WQU-2 (CONTECH CASCADE CS-4)

SCALE: N.T.S.

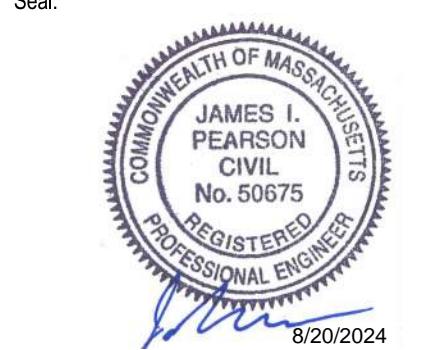
INLET PIPE(S) LOCATION MAY VARY WITHIN 260°



PLAN VIEW B-B
NOT TO SCALE

Date: APRIL 2024
Drawn By:
Reviewed By:
Approved By:
W&S Project No.: ENG22-1087
W&S File No.:
Drawing Title:
DETAILS IV

C504



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Scale:
Date:
Drawn By:
Reviewed By:
Approved By:
W&S Project No.:
W&S File No.:
Drawing Title:
Sheet Number:

Project:
TOWN OF DOVER
DEPARTMENT OF PUBLIC WORKS
SITE IMPROVEMENTS
2 DEDHAM STREET
DOVER, MA 02030

DOVER
PUBLIC WORKS

Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consultants:

Revisions:
No. Date Description

3 08/12/24 PERMITTING FUEL SYSTEM DESIGN
2 05/15/24 PER CONSERVATION FEEDBACK
1 04/10/24 LOCAL PERMIT APPLICATIONS

COA:



| Revisions: | | |
|------------|----------|-------------------------------|
| No. | Date | Description |
| | | |
| | | |
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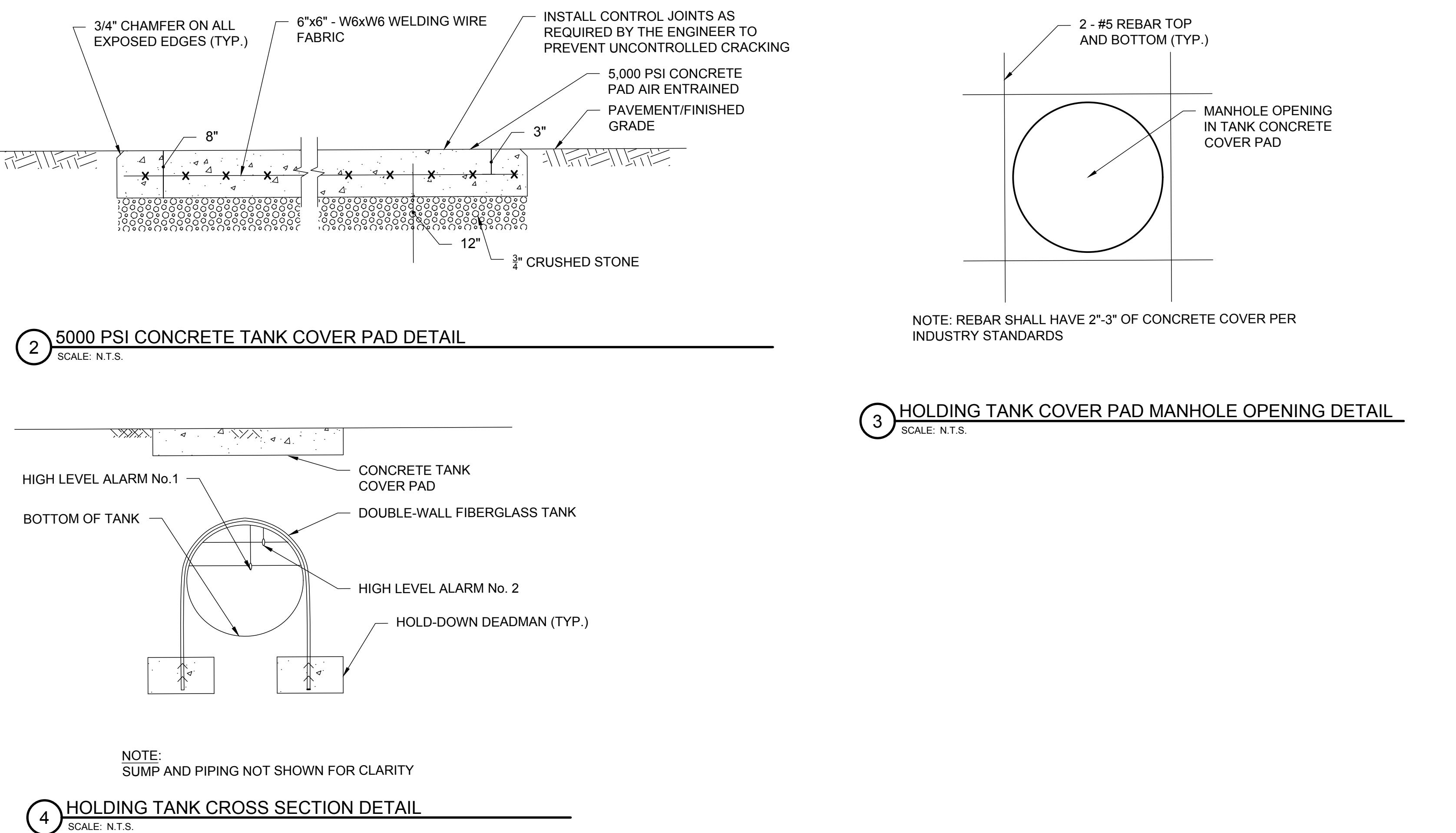
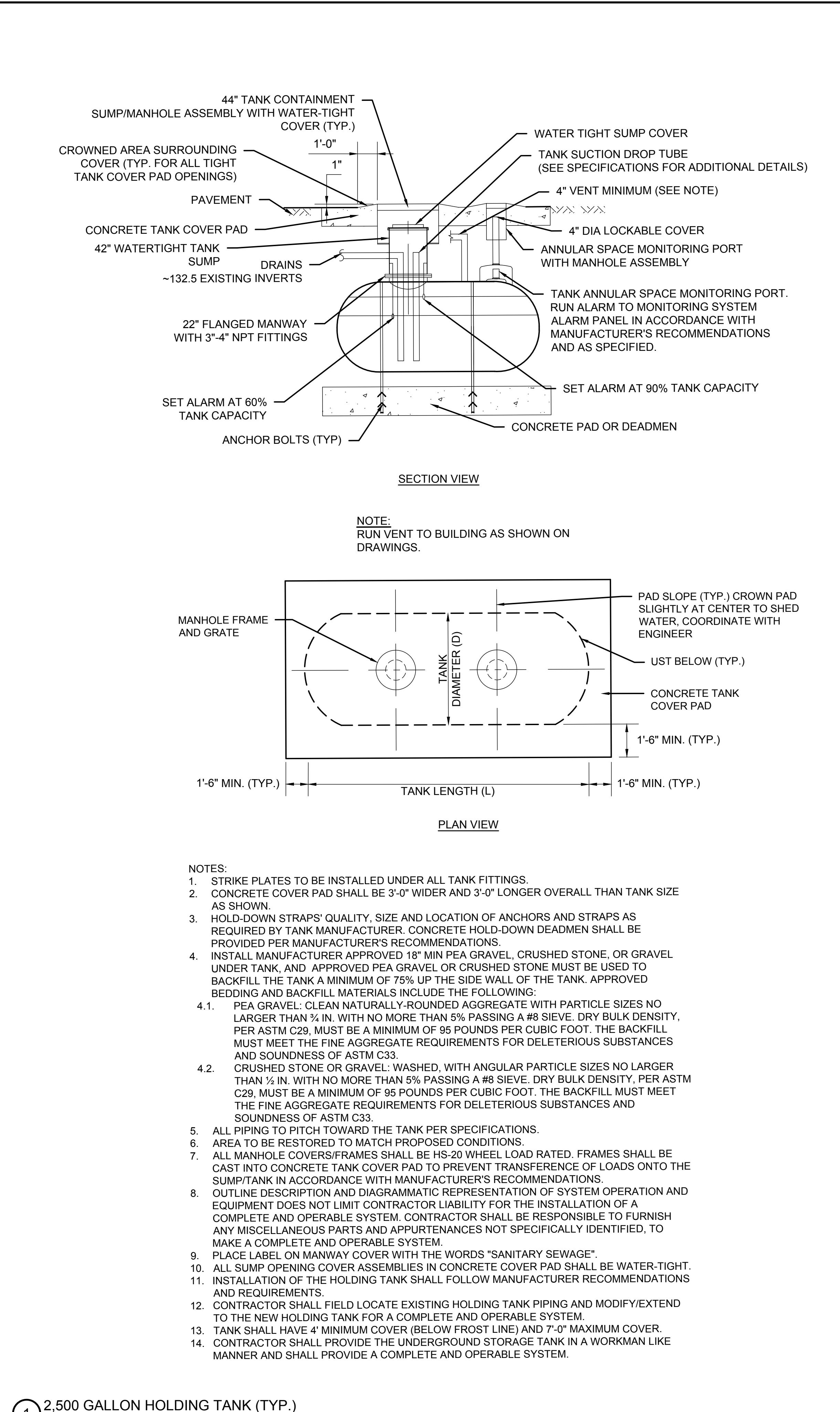


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| Date: | APRIL 2024 |
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| Reviewed By: | |
| Approved By: | |
| W&S Project No.: | ENG22-1087 |
| W&S File No.: | |

DETAILS V

C505





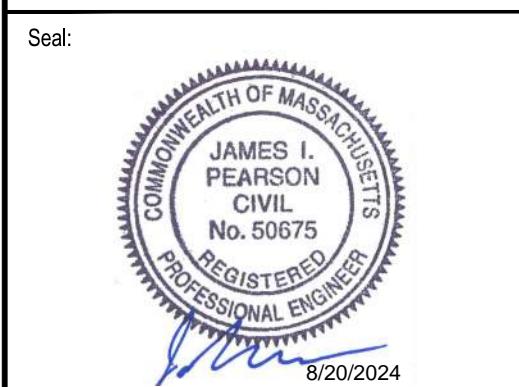
Weston & Sampson

Weston & Sampson Engineers, Inc.
 100 Foxborough Boulevard, Suite 250
 Foxborough, MA 02035
 978.532.1900 800.SAMPSON
 www.westonandsampson.com

Consultants:

| Revisions: | | |
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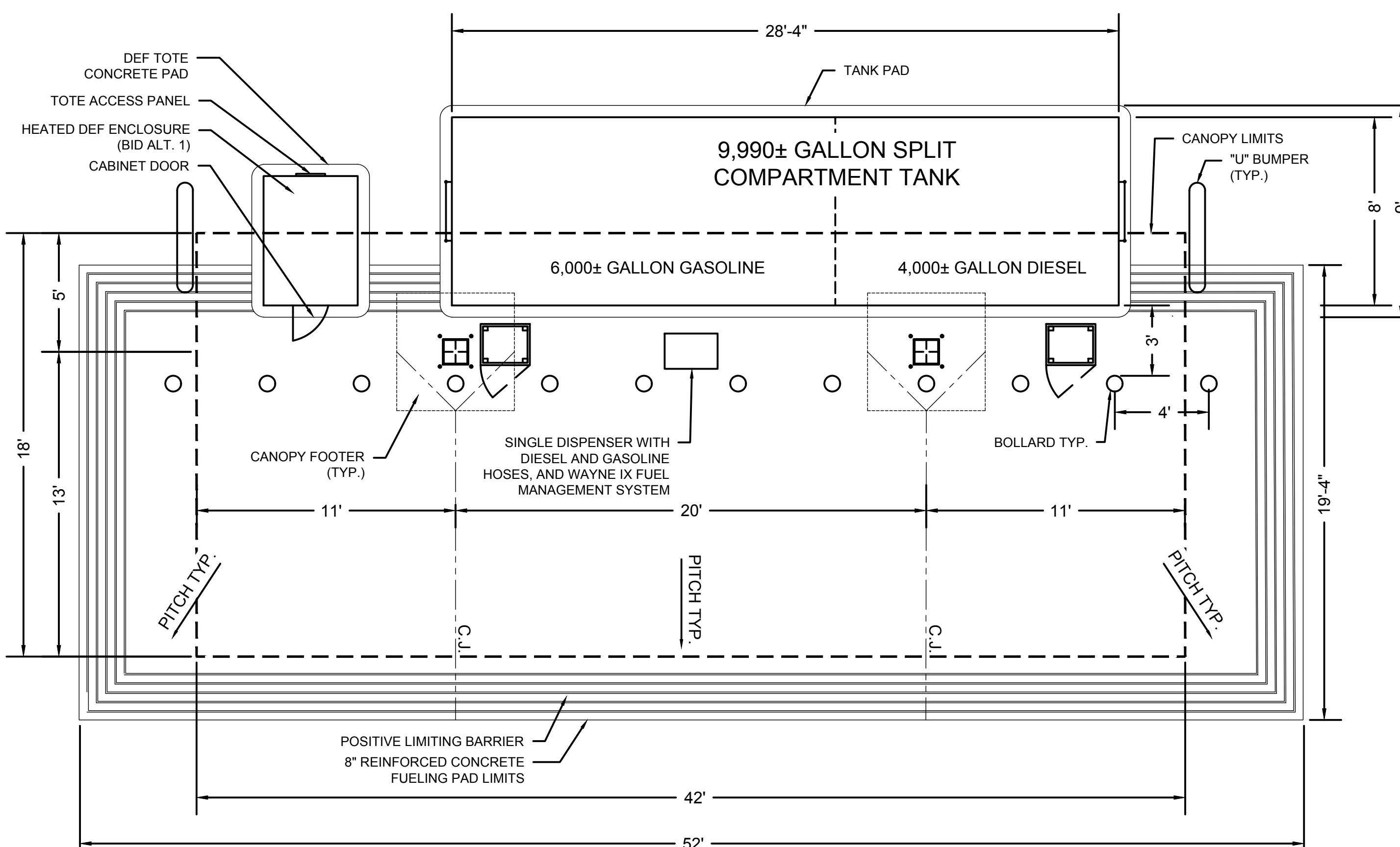
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| Date: | APRIL 2024 |
| Drawn By: | |
| Reviewed By: | |
| Approved By: | |
| W&S Project No.: | ENG22-1087 |
| W&S File No.: | |

Drawing Title:

FUEL SYSTEM LAYOUT

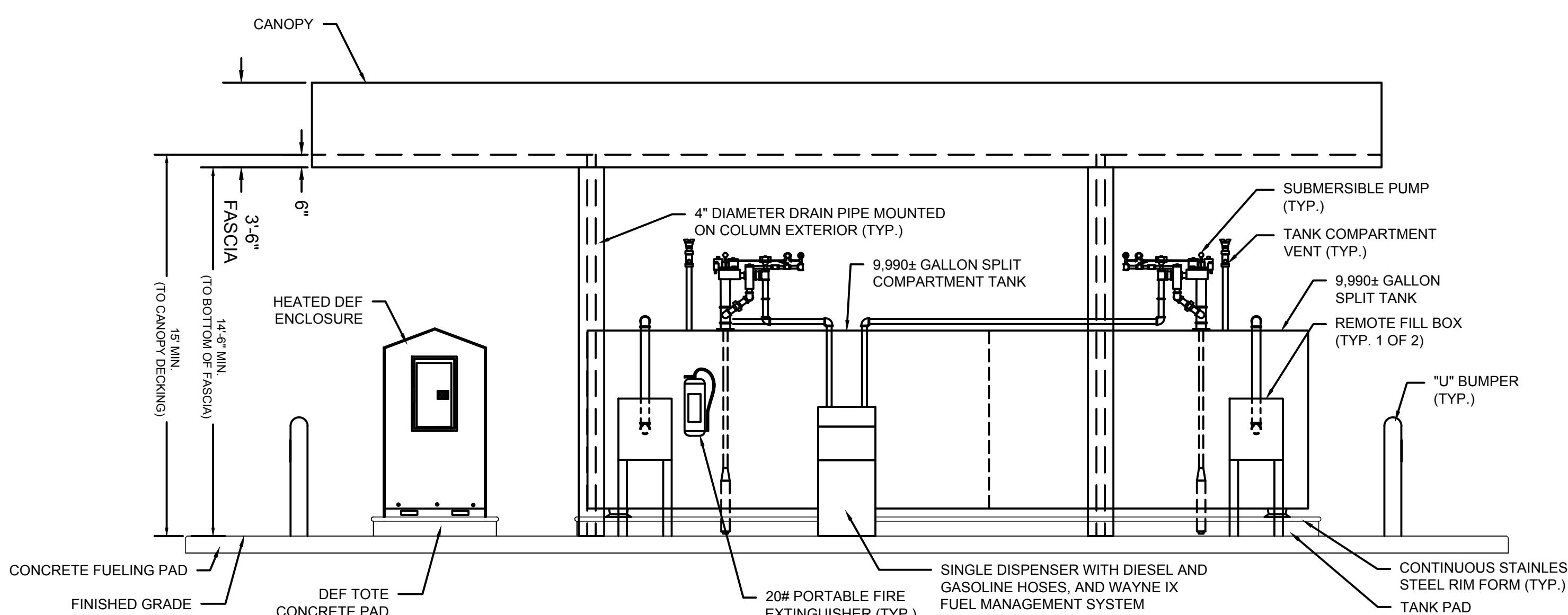
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EQ501



FUEL PUMP ISLAND PLAN

SCALE: $\frac{1}{4}'' = 1'-0''$



FUEL PUMP ISLAND PLAN - ELEVATION

SCALE: $\frac{1}{4}'' = 1'-0''$

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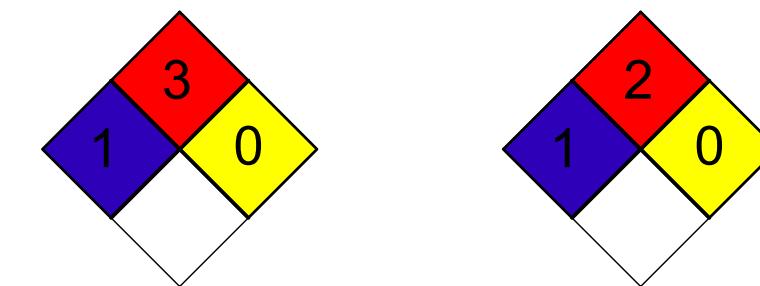
C.J. CONTROL JOINT

FUEL SYSTEM NOTES

- PLANS ARE SCHEMATIC AND SHOW THE GENERAL LAYOUT OF THE FUEL SYSTEM ONLY AND NOT ALL FUEL SYSTEM COMPONENTS ARE SHOWN. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, LABOR, ETC. INCLUDING PIPING, VALVES, WIRING, AND ALL OTHER APPURTENANCES AS NEEDED IN ORDER TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- CONCRETE SLAB PITCH SHALL BE AS SHOWN ON THE CIVIL DRAWINGS.
- FINAL LOCATIONS TO BE APPROVED BY THE ENGINEER FOR TANK MOUNTED HIGH LEVEL ALARMS, EXTINGUISHERS, EMERGENCY PUMP SHUTOFF SWITCHES, AND STANCHION.
- BOLLARDS SHALL BE BOLTED TO THE CONCRETE FUEL PAD WHERE THERE IS CONFLICT WITH THE CANOPY FOOTERS. INSTALL BOLLARDS ACCORDING TO DETAIL WHEN POSSIBLE, IN COORDINATION WITH THE ENGINEERS.
- SEAL CONTROL JOINT PENETRATIONS THROUGH POSITIVE LIMITING BARRIER WITH PETROLEUM RESISTANT SEALANT (SIKA DUOFLEX 5050 PRIMER) AS WELL AS ALL PENETRATIONS THROUGH THE FUELING PAD.
- ALL PROPOSED CANOPY DRAINS SHALL DRAIN TO PROPOSED STORMWATER STRUCTURES VIA UNDERGROUND PIPING AS SHOWN ON THE CIVIL DRAWINGS.
- 14'-6" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE CANOPY FASCIA BOTTOM AND THE FUELING PAD.
- SUBMERSIBLE PUMPS AND TANK VENTS SHALL BE MOUNTED OUTSIDE THE LIMITS OF THE CANOPY FASCIA. TANK VENTS SHALL EXTEND TO 12' ABOVE THE SURROUNDING FUELING PAD GRADE.

CONSTRUCTION NOTES

- TANK SHALL BE LABELED WITH A MINIMUM OF 2-INCH LETTERING WITH THE FOLLOWING INFORMATION:
 TANK ID: #1 #2
 CONTENTS: GASOLINE DIESEL
 SAFE FILL VOLUME (HEIGHT): 5,400 GALLONS (X'-X'')* 3,600 GALLONS (X'-X'')*
 NFPA HAZARD ID:



*CONTRACTOR TO PROVIDE HEIGHT "X" BASED ON MANUFACTURER DATA AND FINAL APPROVED SHOP DRAWING AND LABEL TANK AS SHOWN ABOVE

- THE SAFE FILL LEVEL SHALL BE 90% OF THE TANK VOLUME. THE AUDIBLE AND VISUAL ALARM SHALL BE ACTIVATED AT THIS LEVEL. THE OVERFILL PREVENTION VALVE SHALL BE ACTIVATED AT 95% OF THE TANK VOLUME. INSTALLER SHALL VERIFY THAT THE 95% SHUTOFF VALVE FULLY STOPS FLOW AT THE SPECIFIED LEVEL.
- VALVES, GAUGES, SENSORS, PIPES AND PUMPS ARE SHOWN AT APPROXIMATE LOCATIONS. THESE SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATION.
- THE INSTALLER SHALL VERIFY THAT THE TANK IS TESTED BY THE MANUFACTURER. IF TANK IS DELIVERED TO THE SITE UNDER VACUUM AND MAINTAINS ITS VACUUM THROUGH FINAL PLACEMENT, IT SHALL BE CONSIDERED SUCCESSFULLY TESTED. IF NOT, THE INSTALLER SHALL TEST THE TANK PER NFPA 30 CHAPTER 21.5. TANKS AND INTERSTITIAL SPACE SHALL BE TESTED FOR TIGHTNESS BY POSITIVE AIR PRESSURE OR HYDROSTATICALLY AT PRESSURE BETWEEN 3 AND 5 PSI FOR A MINIMUM OF 1.0 HOUR WITHOUT MEASURABLE LOSS. THE CONTRACTOR SHALL DOCUMENT THE RESULTS OF THE FUEL TANK TIGHTNESS TEST AND SUBMIT CERTIFICATION TO THE OWNER AND ENGINEER CONFIRMING THAT THE PIPING HAS PASSED THE TIGHTNESS TEST, FOR RECORD-KEEPING PURPOSES.
- PIPING SHALL BE TESTED AFTER INSTALLATION. PIPING SHALL BE TESTED PER NFPA 30 CHAPTER 27.7. PIPING SHALL BE TESTED PNEUMATICALLY AT 110% OF THE MAXIMUM ANTICIPATED PRESSURE. THE MAXIMUM PRESSURE OF PIPE SYSTEM PRODUCED AT THE PUMP IS APPROXIMATELY 31 PSI, TEST PRESSURE SHALL BE 110% OF 31 PSI OR 34 PSI. THE TEST PRESSURE SHALL BE MAINTAINED WHILE A COMPLETE VISUAL INSPECTION OF ALL JOINTS AND CONNECTIONS IS CONDUCTED. THE TEST SHALL BE MAINTAINED FOR A MINIMUM OF 10 MINUTES WITHOUT MEASURABLE LOSS. THE CONTRACTOR SHALL DOCUMENT THE RESULTS OF THE FUEL PIPE TIGHTNESS TEST AND SUBMIT CERTIFICATION TO THE OWNER AND ENGINEER CONFIRMING THAT THE PIPING HAS PASSED THE TIGHTNESS TEST, FOR RECORD-KEEPING PURPOSES.
- THE TANK AND PIPING SHALL HAVE PROTECTIVE COATINGS AS SPECIFIED IN NFPA 30.
- THE TANK, PIPING AND ASSOCIATED EQUIPMENT SHALL BE DESIGNED, INSTALLED AND OPERATED TO PREVENT ELECTROSTATIC IGNITION PER THE REQUIREMENTS OF NFPA 30 CHAPTER 6.5.4. TANK, PIPING AND ASSOCIATED EQUIPMENT SHALL BE GROUNDED AND TESTED FOR CONTINUITY PRIOR TO BEING PLACED INTO OPERATION.
- WARNING SIGN(S) SHALL BE CONSPICUOUSLY POSTED IN THE DISPENSING AREA STATING THE FOLLOWING (DIMENSION OF SIGN TO BE DETERMINED. LETTERHEAD SHALL BE MINIMUM OF 1" HIGH):

WARNING:

IT IS UNLAWFUL AND DANGEROUS TO DISPENSE FUEL INTO UNAPPROVED CONTAINERS.

NO SMOKING.

STOP MOTOR.

NO FILLING OF PORTABLE CONTAINERS IN OR ON A MOTOR VEHICLE.

PLACE CONTAINER ON GROUND BEFORE FILLING.

DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCHING A METAL SURFACE AWAY FROM THE NOZZLE.

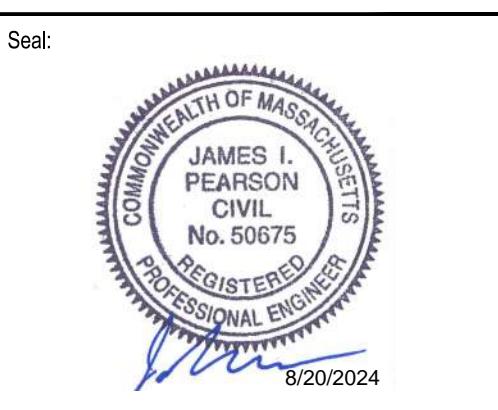
DO NOT RE-ENTER YOUR VEHICLE WHILE FUEL IS PUMPING.

IF A FIRE STARTS, DO NOT REMOVE NOZZLE - BACK AWAY IMMEDIATELY.

DO NOT ALLOW INDIVIDUALS UNDER LICENSED AGE TO USE THE PUMP.



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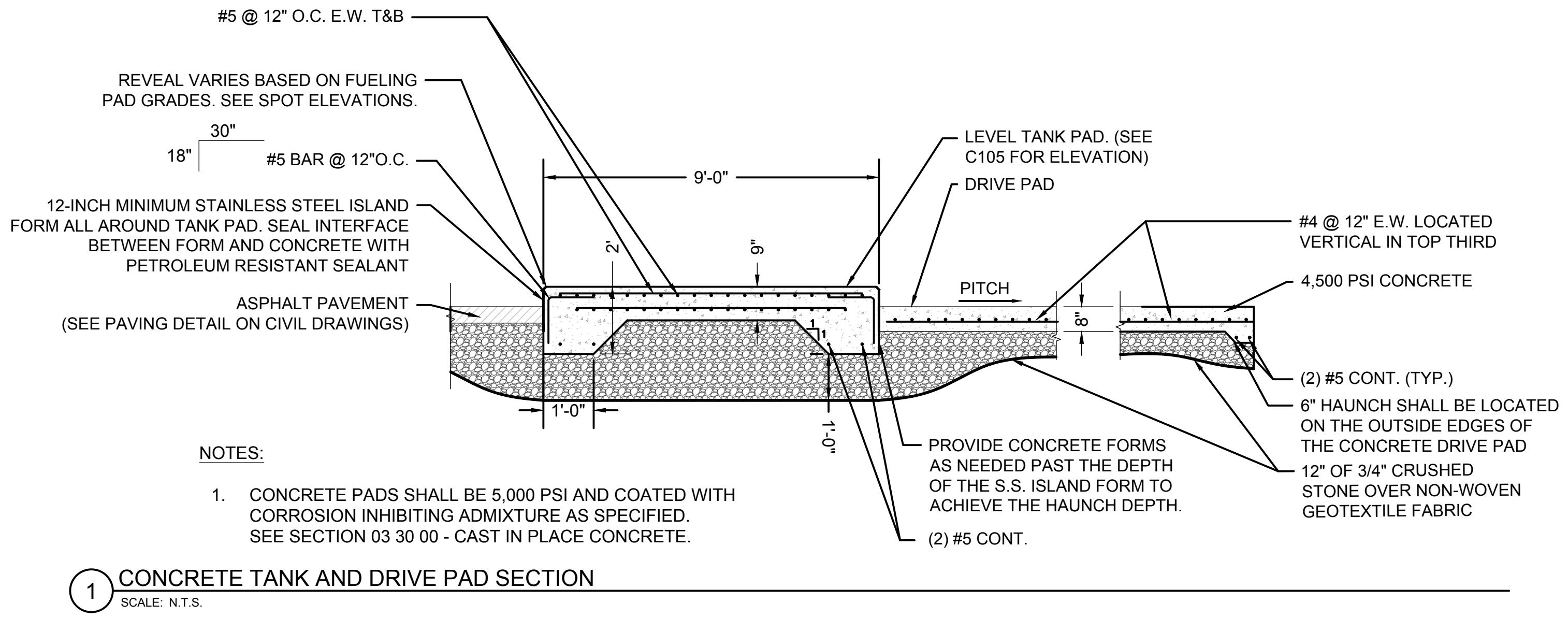


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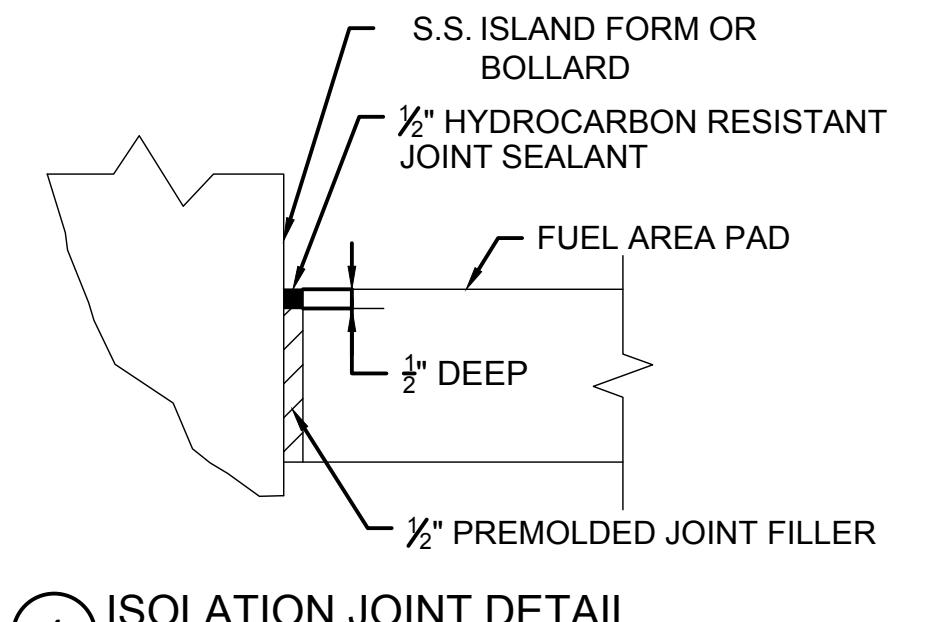
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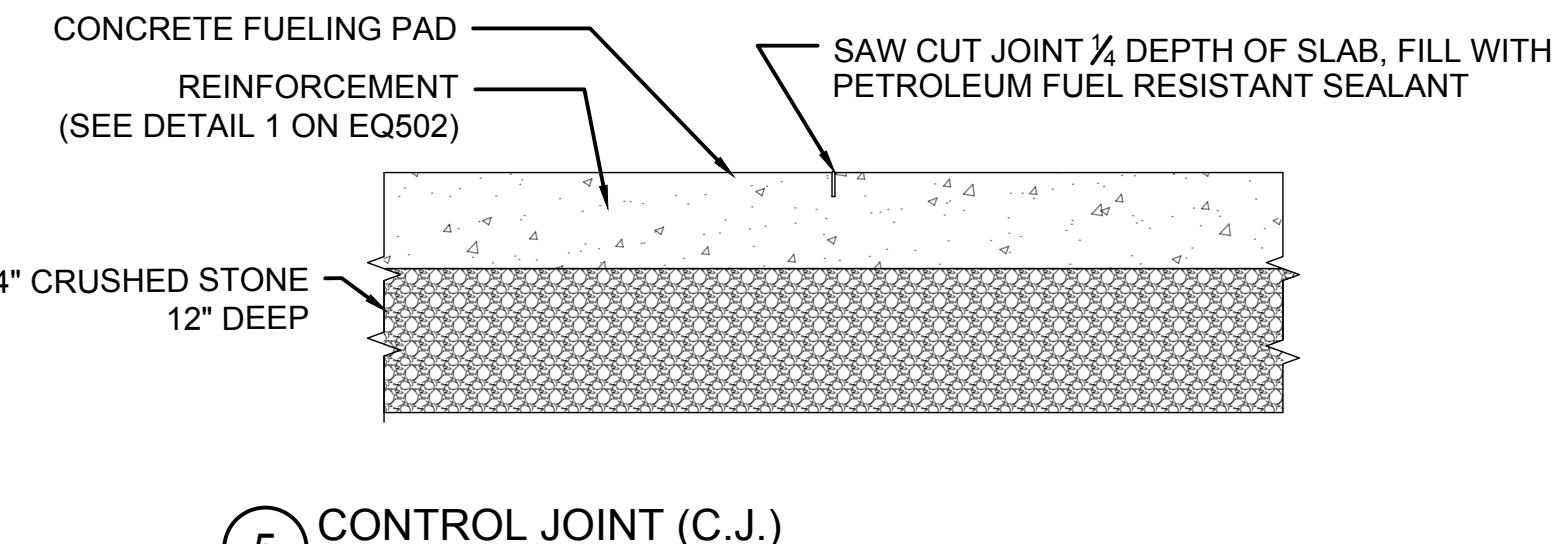
FUEL SYSTEM DETAILS I



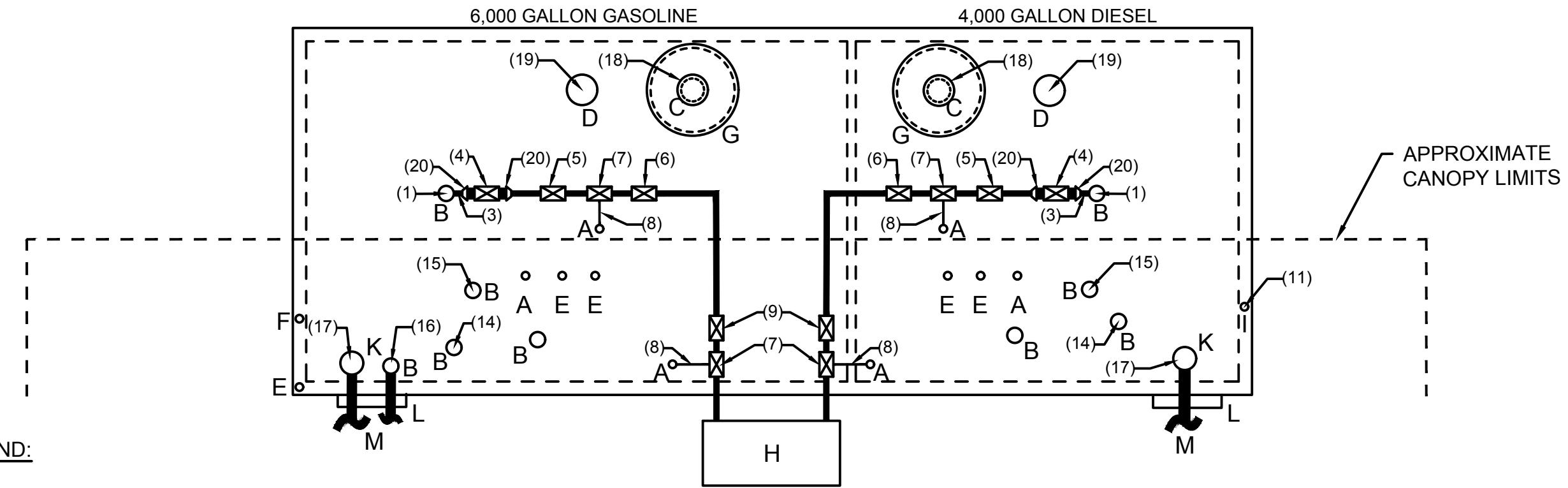
1 CONCRETE TANK AND DRIVE PAD SECTION
SCALE: N.T.S.



4 ISOLATION JOINT DETAIL
SCALE: N.T.S.



5 CONTROL JOINT (C.J.)
SCALE: N.T.S.

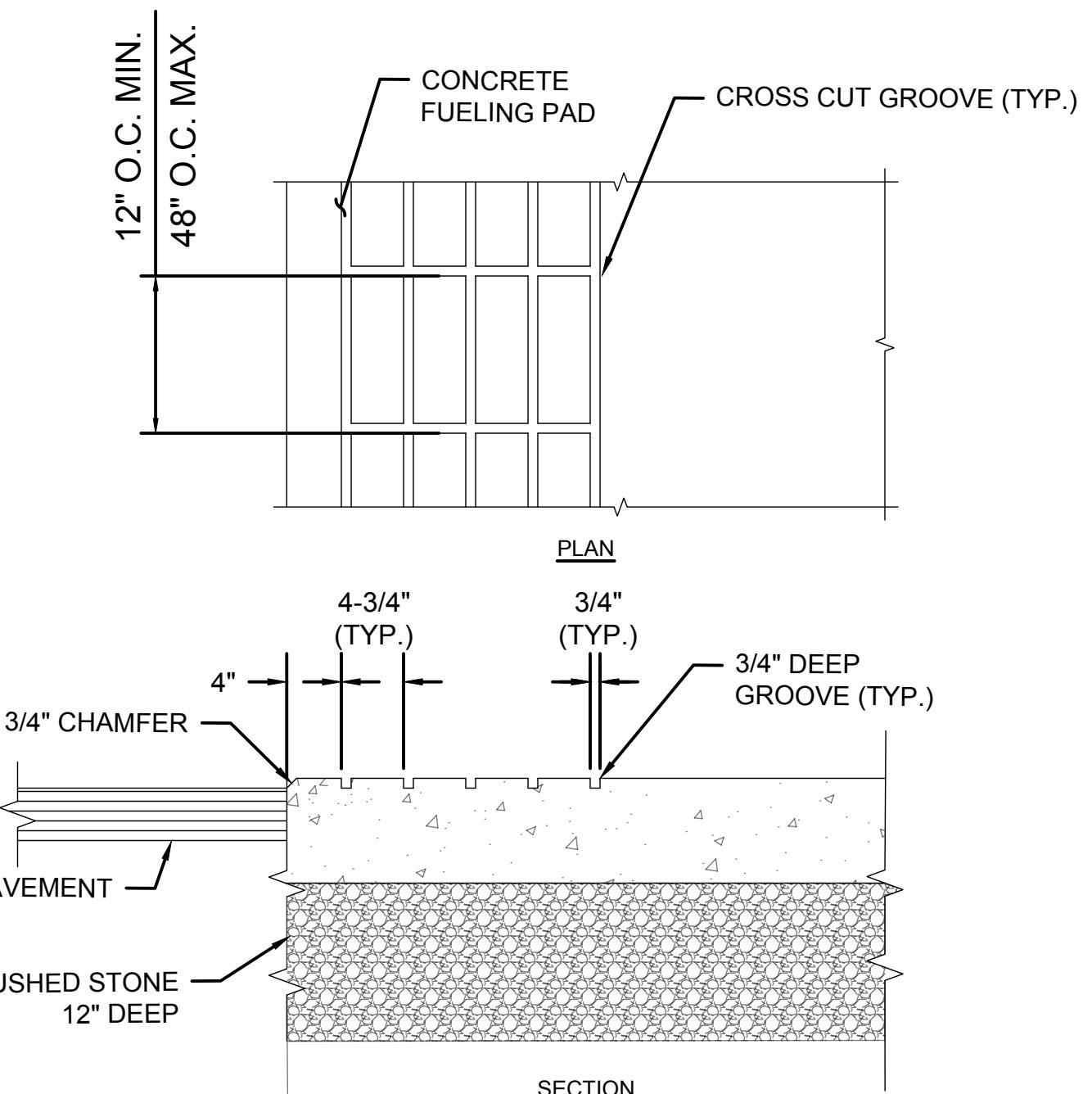


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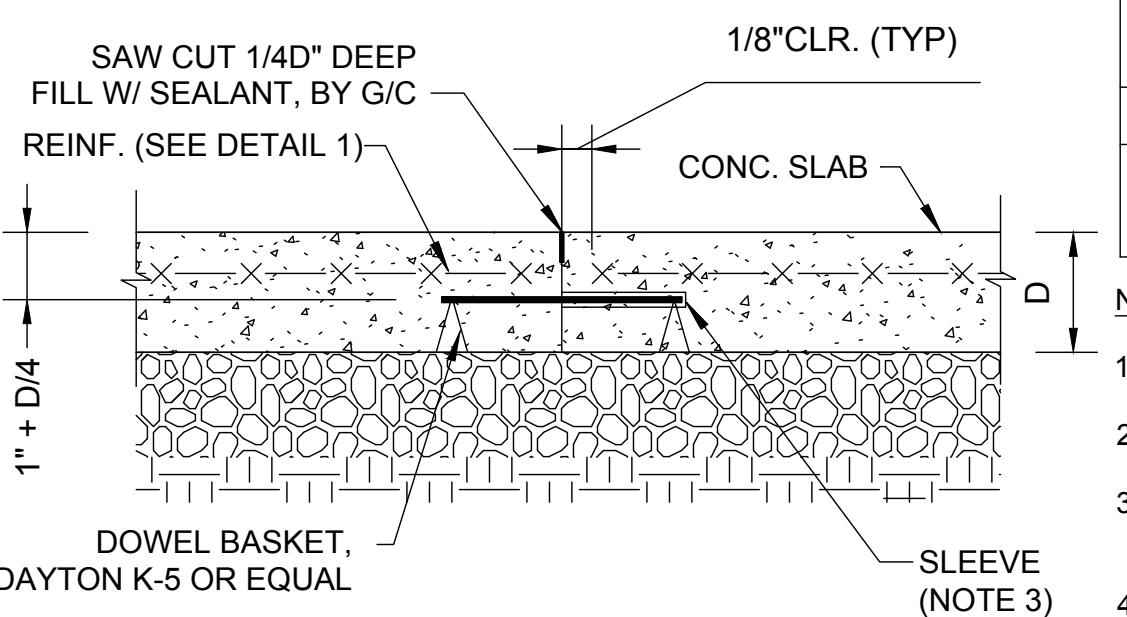
- 2" FEMALE FIREGUARD COUPLING
- 4" FEMALE FIREGUARD COUPLING
- 8" FFSO 150# FLANGE - PRIMARY EMERGENCY VENT USE ONLY
- 8" FFSO 150# FLANGE THROUGH OUTER SHELL ONLY. MARK WITH SPECIAL WARNING LABEL "INTERSTITIAL EMERGENCY VENT USE ONLY"
- 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY
- 2" INTERSTITIAL MONITOR PIPE - MALE NPT END
- 24" TIGHT BOLT MANWAY WITH "C" MOUNTED IN COVER
- PAD MOUNTED DISPENSER/FUEL MANAGEMENT UNIT
- 2" INTERSTITIAL MONITOR PIPE - MALE NPT END - BULK HEAD MONITOR USE
- 6" FEMALE FIREGUARD COUPLING
- 24" Ø x 13" WELDED SPILL BOX W/ HINGED LID
- PIPING SUPPORT BRACKET
- REMOTE FILL BOX

NOTES:

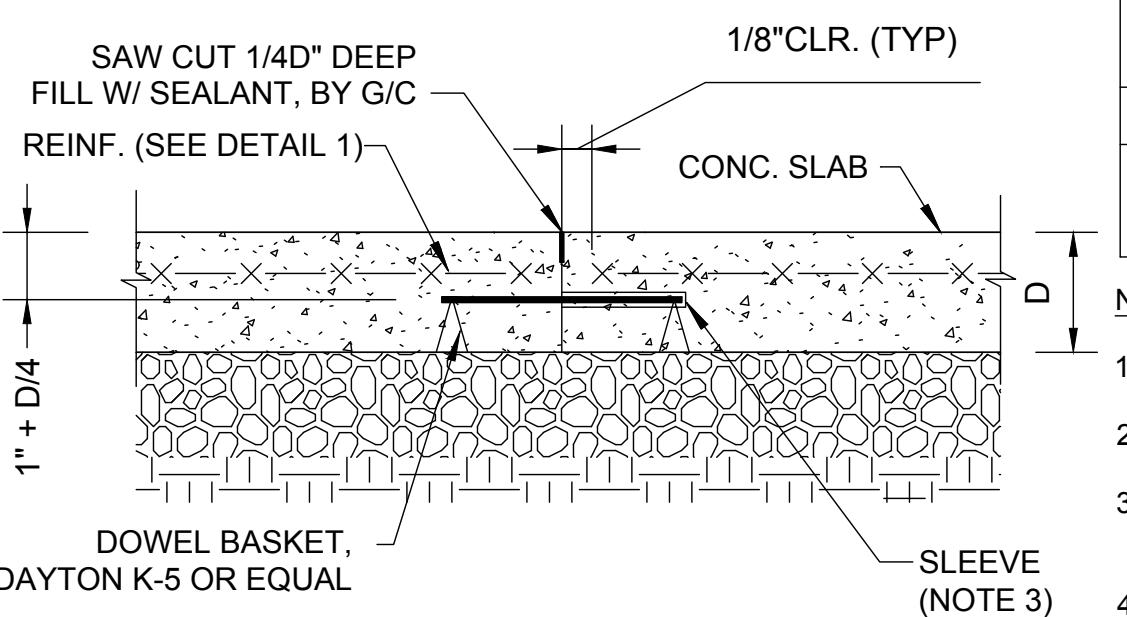
- SEE CONSTRUCTION NOTES ON EQ501 FOR ADDITIONAL INFORMATION/REQUIREMENTS.
- FINAL TANK FITTING LAYOUT AND QUANTITY TO BE ADJUSTED AS NEEDED AND CONFIRMED DURING THE SUBMITTAL PROCESS TO MEET THE DESIGN LAYOUT AND TO MEET MANUFACTURER AND CODE REQUIREMENTS.
- TANK TOP PIPING SUPPORT BRACKETS (NOT SHOWN) SHALL BE INCLUDED TO SUPPORT DISPENSER PIPING AS NEEDED.
- CONTRACTOR SHALL SUPPLY AND INSTALL ALL VALVES, FITTINGS, PIPING, AND EQUIPMENT AS NEEDED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- MANUFACTURERS AND MODEL NUMBERS LISTED ARE NOT INTENDED TO LIMIT COMPETITION OR TO LIMIT THE EQUIPMENT TO ANY SPECIFIC MANUFACTURER. THE MAKE AND MODEL NUMBERS LISTED ARE LISTED TO SET A MINIMUM STANDARD OF QUALITY. ADDITIONAL ACCEPTABLE MANUFACTURERS ABLE TO MEET THE SPECIFIED REQUIREMENTS AND QUALITY MAY BE APPROVED BY THE ENGINEER.



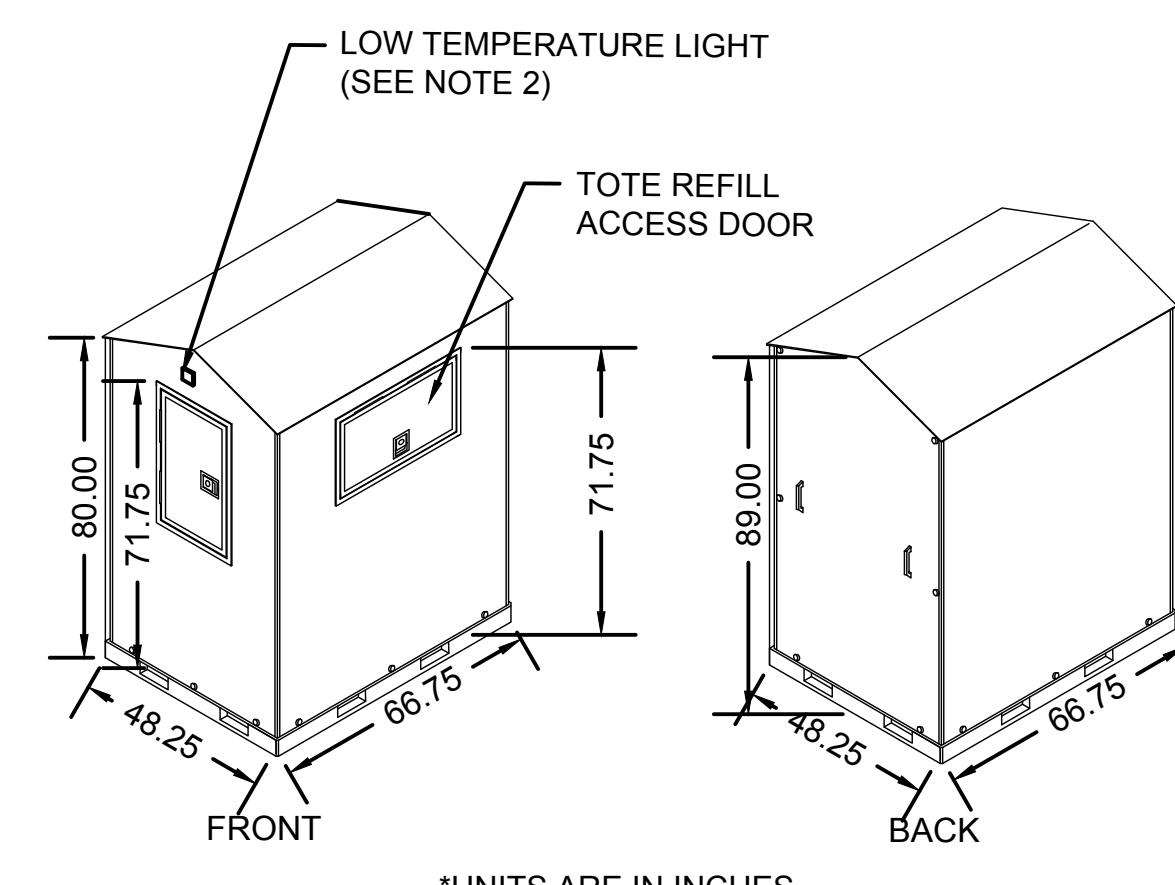
2 POSITIVE LIMITING BARRIER DETAIL
SCALE: N.T.S.



3 BOLLARD DETAIL
SCALE: N.T.S.



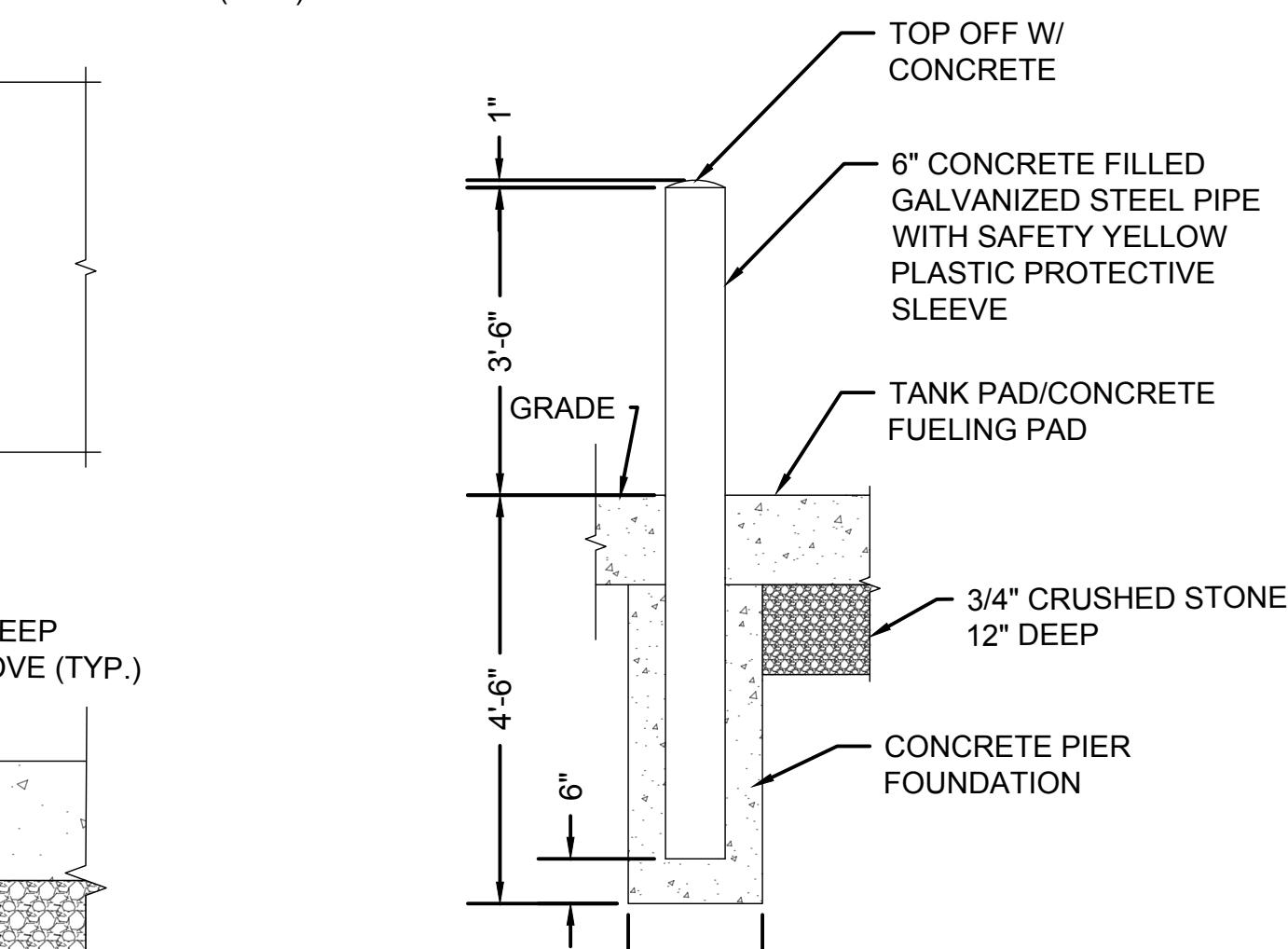
6 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: N.T.S.



NOTES:

- REFER TO SPECIFICATION SECTION 33 22 13 DIESEL EXHAUST FLUID STORAGE AND DISPENSING SYSTEM FOR ADDITIONAL REQUIREMENTS.
- LOW TEMPERATURE LIGHT SHALL BE LOCATED SO IT IS VISIBLE FROM THE MAINTENANCE GARAGE

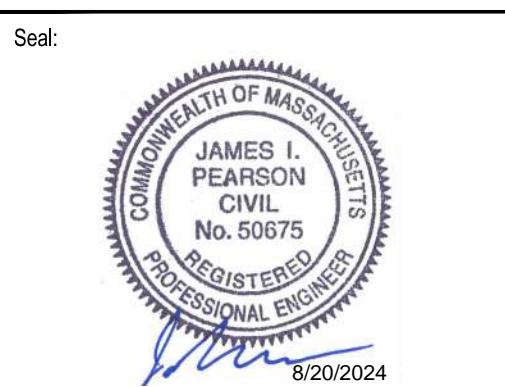
8 HEATED DEF TOTE STORAGE CABINET
SCALE: N.T.S.



9 "U" BUMPER DETAIL
SCALE: N.T.S.



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| Drawing Title: | FUEL SYSTEM DETAILS II |
| Sheet Number: | EQ503 |
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