

HELEN PUTNAM REGIONAL PARK RAINWATER PROJECT

DESIGN PROFESSIONAL IN CHARGE

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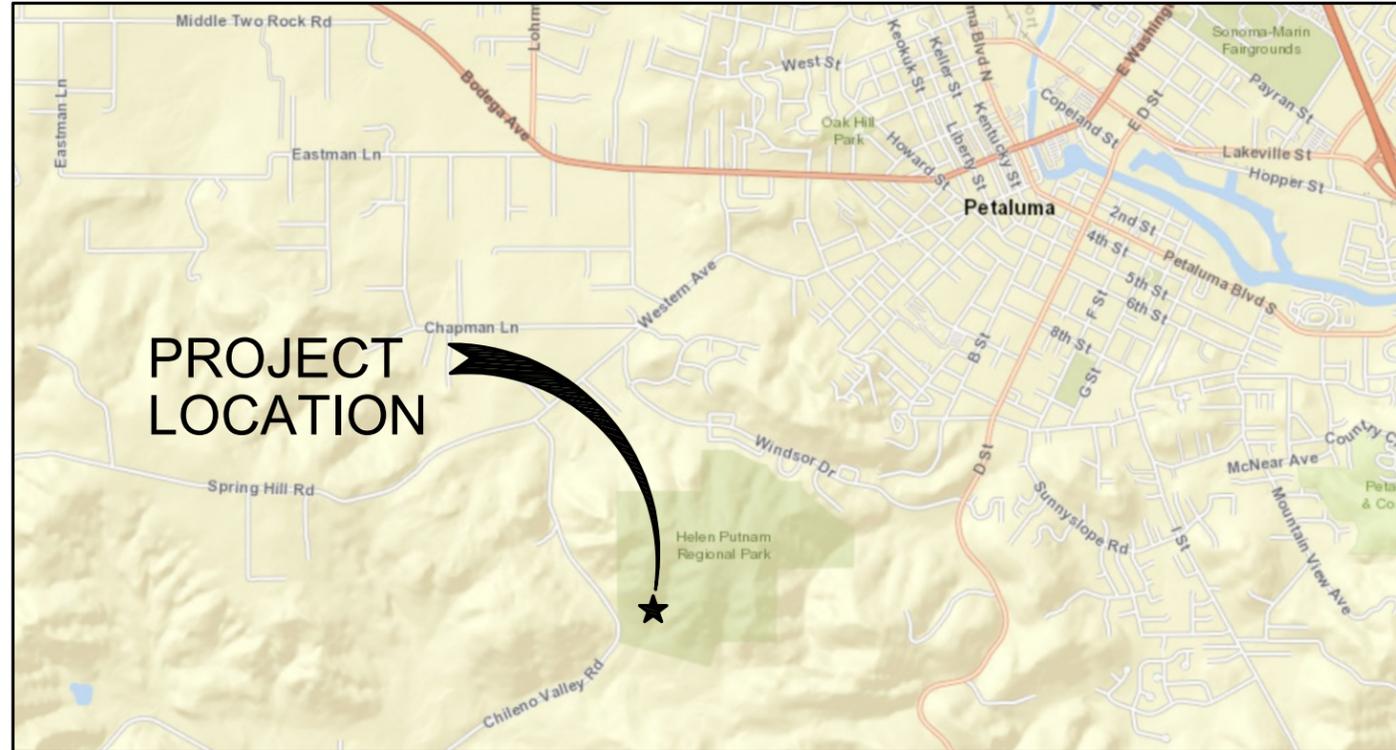
PJC & ASSOCIATES, INC.
600 MARTIN AVE. STE 200
ROHNERT PARK, CA 94928
707-584-4804

SOIL OBSERVATIONS SHALL BE
REQUIRED BY GEOTECHNICAL ENGINEER



RAINWATER CATCHMENT

APPROX. 5,300 SF OF ROOF WILL
GENERATE 52,000 GALLONS OF
RAINWATER BASED ON AN AVERAGE
ANNUAL DRY YEAR PRECIPITATION OF
21 INCHES. TOTAL PROPOSED
STORAGE VOLUME = 46,000 GAL.



**PROJECT
LOCATION**

EARTHWORK

CUT: 220 CY
FILL: 70 CY
NET: 150 CY

VICINITY MAP

1" = 4,000'

PROJECT DESCRIPTION

RAINWATER CATCHMENT PROJECT,
INCLUDING TWO METAL TANKS: 5,000
GALLON TANK (NOT PART OF BUILDING
PERMIT) AND 41,000 GALLON TANK,
1,200 SF CARPORT, COLLECTING
RAINWATER FROM ROOF. RAINWATER
WILL BE GRAVITY FED TO BOTH TANKS.
PROJECT INCLUDES CARPORT,
GUTTERS, DOWNSPOUTS, FIRST FLUSH
DIVERSION, FILL LINES, TANKS,
OVERFLOW, FIRE DEPARTMENT
CONNECTIONS, DISTRIBUTION
SYSTEM, AND RETAINING WALL.

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Revisions	By	JP
	Date	2023-10-02
No.	1	BID

411 CHILENO VALLEY RD PETALUMA, CA 94952	APN 020-080-012	Date: 07/25/2023 Scale: As Shown Designed by: JP Drawn by: JP Checked by: TH
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HELEN PUTNAM REGIONAL PARK RAINWATER PROJECT	TITLE
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GENERAL/ CIVIL LEGEND

EXISTING	
	ELECTRICAL
	FLOWLINE/SWALE/DRAINAGE DITCH
	OVERHEAD POWERLINE
	FIRE PROTECTION
	GAS
	IRRIGATION
	LEACHFIELD
	STORM DRAIN
	TELEPHONE LINE
	WATER LINE
	CONTOUR
	SPOT ELEVATION OR GRADE
	VINEROW
	VINEYARD LIMITS
	FENCE
	PROPERTY LINE
	EASEMENT
	CULVERT
	FIRE HYDRANT
	IRRIGATION BOX
	BURIED VALVE
	EXISTING BUILDING

NEW	
	ELECTRICAL
	FLOWLINE
	GAS (G)
	STORM DRAIN (SD)
	SANITARY SEWER (SS)
	WATER (W)
	RAINWATER (R)
	GRADE BREAK
	CONTOUR
	TOP OF CUT/BANK
	EMBANKMENT SLOPE, AS INDICATED
	TOE OF FILL
	SLOPE (3 HORIZ TO 1 VERT)
	FLOW ARROW
	SLOPE
	SPOT ELEV OR FINISHED GRADE
	SHOULDER
	EDGE OF PAVEMENT
	CONCRETE
	AGGREGATE BASE ROCK
	SAND

	CONNECT TO (E) UTILITY
	CAP OR PLUG UTILITY
	CLAY OR SLURRY CEMENT PLUG
	THRUSTBLOCK
	FIRE HYDRANT
	CHECK VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	HOSE BIBB
	REDUCER/ENLARGER
	CLEANOUT (CO)
	DOWNSPOUT (DS)
	DI (DROP INLET) OR AD (AREA DRAIN)
	FIBER ROLL
	SILTFENCE
	OVERLAND RELEASE ROUTE/FLOW DIRECTION
	RIPRAP/COBBLER

ABBREVIATIONS

AD	AREA DRAIN	NRCS	NATURAL RESOURCES CONSERVATION SERVICE
BLDG	BUILDING	PE	POLYETHYLENE
BMP	BEST MANAGEMENT PRACTICES	PIP	PROTECT IN PLACE
CASQA	CALIFORNIA STORMWATER QUALITY ASSOCIATION	PSI	POUNDS PER SQUARE INCH
CBC	CALIFORNIA BUILDING CODE	PVC	POLYVINYLCHLORIDE
CPC	CALIFORNIA PLUMBING CODE	R	RAINWATER
CO	CLEANOUT	REINF	REINFORCEMENT
DI	DRAIN INLET	RWQCB	REGIONAL WATER QUALITY CONTROL BOARD
DIA	DIAMETER	SCC	SONOMA COUNTY CODE
DS	DOWNSPOUT	SD	STORM DRAIN
E	EXISTING	SHT	SHEET
EG	EXISTING GRADE	SS	SANITARY SEWER
FG	FINISHED GRADE	TC	TOP OF CONCRETE
FT	FOOT, FEET	TG	TOP OF GRATE
G	GAS	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	W	WATER
INV	INVERT	WSL	WATER SURFACE LEVEL
IRR	IRRIGATION		
GPM	GALLONS PER MINUTE		
GSP	GALVANIZED STEEL PIPE		
HDPE	HIGH DENSITY POLYETHYLENE		
LF	LINEAR FEET		
O.C.	ON CENTER		
O.S.H.A.	OCCUPATIONAL SAFETY & HEALTH ASSOCIATION		
MAX	MAXIMUM		
MIN	MINIMUM		
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM		



Sheet No.
C1.0

GENERAL NOTES

1. WORK DESCRIBED IN THESE NOTES INCLUDES, BUT IS NOT LIMITED TO, METHODS AND MATERIALS REQUIRED TO CONSTRUCT THE HELEN PUTNAM RAINWATER PROJECT AND EROSION AND SEDIMENT CONTROLS. ALL WORK SHALL BE PERFORMED IN COORDINATION WITH THE OWNER AND SONOMA RESOURCE CONSERVATION DISTRICT (SRCO) REPRESENTATIVE OR ENGINEER.
2. STATE, AND FEDERAL CODES, LAWS, APPLICABLE PERMITS, ORDINANCES, RULES, AND REGULATIONS RELATING TO ANY PORTION OF THE WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE NOTES, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR. THE PLANS AND NOTES SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY OF THE ABOVE RULES AND REGULATIONS.
3. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND/OR APPLICABLE COUNTY OF SONOMA CODES, ORDINANCES, ZONING AND PLANNING LAWS, AND CALTRANS STANDARDS.
4. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.) STANDARDS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR AND/OR THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL SECURE A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH OVER FIVE FEET DEEP.
5. ALL ON-SITE WATER LINE CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA PLUMBING CODE (C.P.C.) AND ALL APPLICABLE REGULATIONS OF THE COUNTY OF SONOMA AND COGNIZANT UTILITY COMPANIES.
6. ALL WORK SHALL BE GOVERNED BY THE DIMENSIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK, ORDERING OR FABRICATING ANY MATERIALS.
7. THIS DRAWING DOES NOT REPRESENT A PROPERTY SURVEY. PROPERTY LINES HAVE BEEN PLOTTED FOR INFORMATIONAL PURPOSES ONLY AND ARE APPROXIMATE.
8. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.
9. THE LOCAL JURISDICTION HAVING AUTHORITY SHALL BE NOTIFIED 72 HOURS PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE JURISDICTION HAVING AUTHORITY INFORMED OF THE CONSTRUCTION SCHEDULE.
10. CONTRACTOR SHALL PROVIDE 72 HOURS ADVANCE NOTICE TO THE ENGINEER FOR REQUESTED INSPECTIONS.
11. MATERIALS AND WORKMANSHIP SHALL CONFORM TO ADOPTED SONOMA COUNTY STANDARDS AND CALTRANS STANDARDS.
12. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN ARE BASED ON THE BEST INFORMATION AVAILABLE. THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT HAVE BEEN INDICATED ON THESE DRAWINGS. THE ENGINEER

ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES; CONFLICTS AND/OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. UNLESS OTHERWISE NOTED, EXISTING UTILITIES SHALL BE PROTECTED AND MAINTAINED IN SERVICE BY THE CONTRACTOR. UTILITIES THAT INTERFERE WITH WORK TO BE PERFORMED UNDER THIS PROJECT SHALL BE PROTECTED IN ACCORDANCE WITH COUNTY OF SONOMA, P.G.&E AND AT&T REQUIREMENTS.

13. UNDERGROUND SERVICE ALERT (U.S.A.) - CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL UNCOVER RELEVANT UTILITIES TO VERIFY THEIR LOCATION AND ELEVATION. IF UNEXPECTED OR CONFLICTING UTILITIES ARE ENCOUNTERED DURING EXCAVATION, NOTIFY U.S.A., THE UTILITY OWNER, AND/OR THE ENGINEER OF RECORD IMMEDIATELY. UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER, SEWER, ELECTRICAL, GAS, TELEPHONE, AND CABLE/TV. IF PRACTICAL, THE EXCAVATOR SHALL DELINEATE WITH WITH PAINT OR OTHER SUITABLE MARKINGS THE AREA TO BE EXCAVATED.
14. THE CONTRACTOR SHALL NOTIFY P.G.&E AND AT&T PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE UTILITY COMPANIES INFORMED OF THE CONSTRUCTION SCHEDULE.
15. SRCO SHALL SECURE ALL NECESSARY PERMITS AND CONTRACTOR SHALL SECURE ALL NECESSARY INSPECTIONS FROM SONOMA COUNTY. THE OWNER WILL MAKE APPLICATIONS AND SHALL PAY ALL PERMIT FEES.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM CONSTRUCTION WORK. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
17. CONTRACTOR SHALL COORDINATE CONSTRUCTION WORK WITH EXISTING FACILITIES REQUIREMENTS & OPERATIONS. CONTRACTOR SHALL BE PREPARED TO PHASE PORTIONS OF THE WORK SO THAT IT DOES NOT INTERFERE WITH OR INHIBIT EXISTING FACILITY OPERATIONS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ACCESS TO THE SITE AND ADJOINING OPERATIONS OPEN TO THE OWNERS AT ALL TIMES. SAFE ACCESS SHALL BE MAINTAINED FOR ALL PUBLIC, PARK USERS, AND LANDOWNERS WITH ACCESS EASEMENTS. PUBLIC SAFETY SHALL BE MAINTAINED AT ALL TIMES. CONSTRUCTION SITE SHALL BE SAFELY CONTAINED WITH WARNING SIGNAGE, TAPE, AND FENCING. PUBLIC ACCESS ADJACENT TO THE CONSTRUCTION SITE SHALL BE SAFELY MAINTAINED.
19. OBTAINING OF CONSTRUCTION WATER AND UTILITIES SHALL BE COORDINATED WITH THE OWNER.
20. ALL EXISTING VALVE AND METER BOXES, MANHOLES AND CLEANOUTS SHALL BE RAISED TO NEW GRADE AS REQUIRED.
21. ALL EXISTING FENCES AND GATES AT THE SITE SHALL BE LOCATED, PROTECTED AND MAINTAINED AT ALL TIMES.
22. ON-SITE GRADING SHALL NOT INHIBIT OFF-SITE

DRAINAGE.

23. THE SCREENED CONTOURS AND TOPOGRAPHIC INFORMATION ON THESE DRAWINGS REPRESENT THE APPROXIMATE SURFACE BASED ON 1-FOOT GIS CONTOURS OBTAINED FROM THE SONOMA COUNTY VEGMAP DATABASE 2013 LIDAR DATA OBTAINED FEBRUARY 2022. HORIZONTAL DATUM: NAD83 AND VERTICAL DATUM: NAVD88. EXISTING SITE CONDITIONS SHOULD BE VERIFIED BY THE CONTRACTOR.
24. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR SOIL CONDITIONS IN THE AREA OF CONSTRUCTION OPERATIONS. FOR INFORMATION ON GEOLOGY AND EARTHWORK REQUIREMENTS, REFER TO THE GEOTECHNICAL REPORT TITLED "GEOTECHNICAL INVESTIGATION, HELEN PUTNAM REGIONAL PARK " PREPARED BY PJC & ASSOCIATES, INC., DATED JUNE 14, 2023. ALL WORK SHALL CONFORM WITH THE GEOTECHNICAL INVESTIGATION REPORT REFERENCED. WHERE RECOMMENDATIONS IN THE PLANS DIFFER FROM THE GEOTECHNICAL REPORT, THE REPORT SHALL GOVERN UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER.
25. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND OTHER SERVICES NECESSARY FOR PROPER EXECUTION OF THIS CONTRACT.
26. CONTRACTOR SHALL LAYOUT LOCATION OF TANK AND PIPES IN THE FIELD BEFORE CONSTRUCTION TO ALLOW FOR MINOR ADJUSTMENTS BY THE OWNER OR SRCO REPRESENTATIVE.
27. SUBSTITUTIONS FOR MATERIALS OR EQUIPMENT INDICATED ON THE CONTRACT DRAWINGS SHALL BE REVIEWED BY THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR WORK AFFECTED BY SUCH CHANGES ACCOMPLISHED WITHOUT ENGINEER'S REVIEW.
28. THE CONTRACTOR SHALL PROVIDE THE OWNER, AS A CONDITION OF COMPLETION AND RECEIPT OF FINAL PAYMENT, A WRITTEN GUARANTEE COVERING ALL MATERIALS AND WORKMANSHIP FURNISHED AND PERFORMED FOR THIS WORK AGAINST DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FILING THE NOTICE OF COMPLETION.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A DAILY RECORD OF "AS BUILT" CONDITIONS THAT DIFFER FROM THE ORIGINAL DRAWINGS. THE CONTRACTOR WILL BE PROVIDED WITH A SET OF REPRODUCIBLE DRAWINGS ON WHICH THE "AS BUILT" CONDITIONS SHALL BE RECORDED. THE "AS BUILT" DRAWING (SIGNED AND DATED) SHALL BE FURNISHED TO THE ENGINEER UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT.
30. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, GEOTECHNICAL ENGINEER, SRCO REPRESENTATIVE AND OWNER TO DISCUSS THE SCOPE OF THE PROJECT, PERMIT CONDITIONS, REQUIRED INSPECTIONS, APPROPRIATE APPLICATION OF BEST MANAGEMENT PRACTICES (BMPs) AND ANY OTHER CONSTRUCTION ISSUE.
31. TANK USE AND OCCUPANCY CLASSIFICATION: CBC 312, GROUP U, CONSTRUCTION TYPE: 11-B.

GRADING AND DRAINAGE NOTES

1. PERFORM GRADING AND DRAINAGE IMPROVEMENTS IN ACCORDANCE WITH APPLICABLE SONOMA COUNTY

REGULATIONS.

2. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERING DISCREPANCIES, ERRORS, OR OMISSIONS IN THE PLANS. PRIOR TO PROCEEDING, THE OWNER SHALL HAVE THE PLANS REVISED TO CLARIFY IDENTIFIED DISCREPANCIES, ERRORS, OR OMISSIONS.
 3. EXISTING DRAINAGE COURSES RECEIVING WATERS FROM THIS SITE AND LOCATED THROUGHOUT THE SITE SHALL REMAIN OPEN AND CLEAR OF DEBRIS TO PROPERLY CONVEY STORMWATER.
 4. IN THE EVENT PALEONTOLOGICAL RESOURCES OR PREHISTORIC, HISTORIC OR TRIBAL CULTURAL RESOURCES ARE DISCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, ALL WORK SHALL IMMEDIATELY BE HALTED WITHIN THE IMMEDIATE VICINITY OF THE FIND SHALL BE HALTED. CONTRACTOR SHALL IMMEDIATELY CALL SRCO TO ASSESS THE SIGNIFICANCE OF THE FIND TO ENSURE THAT THE RESOURCES ARE AVOIDED. SRCO WILL IMMEDIATELY NOTIFY PERMIT SONOMA PROJECT REVIEW STAFF OF THE FIND. SRCO SHALL BE RESPONSIBLE FOR THE COST TO HAVE A QUALIFIED PALEONTOLOGIST, ARCHAEOLOGIST OR TRIBAL CULTURAL RESOURCE SPECIALIST UNDER CONTRACT TO EVALUATE THE FIND AND MAKE RECOMMENDATIONS TO PROTECT THE RESOURCE IN A REPORT TO PERMIT SONOMA. THE NORTHWEST INFORMATION CENTER SHALL BE NOTIFIED AT (707) 588-8455. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. ADDITIONAL MITIGATION MAY BE REQUIRED PER THE ARCHEOLOGIST'S RECOMMENDATIONS.
- PALEONTOLOGICAL RESOURCES INCLUDE FOSSILS OF ANIMALS, PLANTS OR OTHER ORGANISMS. PREHISTORIC RESOURCES INCLUDE HUMANLY MODIFIED STONE, SHELL, OR BONES, HEARTHES, FIREPITS, OBSIDIAN AND CHERT FLAKED-STONE TOOLS (E.G., PROJECTILE POINTS, KNIVES, CHOPPERS), MIDDEN (CULTURALLY DARKENED SOIL CONTAINING HEAT-AFFECTED ROCK, ARTIFACTS, ANIMAL BONE, OR SHELLFISH REMAINS), STONE MILLING EQUIPMENT, SUCH AS MORTARS AND PESTLES, AND CERTAIN SITES FEATURES, PLACES, CULTURAL LANDSCAPES, SACRED PLACES AND OBJECTS WITH CULTURAL VALUE TO A CALIFORNIA NATIVE AMERICAN TRIBE. HISTORIC RESOURCES INCLUDE ALL BY-PRODUCTS OF HUMAN USE GREATER THAN FIFTY (50) YEARS OF AGE INCLUDING, BACKFILLED PRIVIES, WELLS, AND REFUSE PITS; CONCRETE, STONE, OR WOOD STRUCTURAL ELEMENTS OR FOUNDATIONS; AND CONCENTRATIONS OF METAL, GLASS, AND CERAMIC REFUSE.
- IF HUMAN REMAINS ARE ENCOUNTERED, WORK IN THE IMMEDIATE VICINITY SHALL BE HALTED AND THE OPERATOR SHALL NOTIFY SRCO, PERMIT SONOMA AND THE SONOMA COUNTY CORONER AT (707) 565-5070 IMMEDIATELY. AT THE SAME TIME, SRCO SHALL BE RESPONSIBLE FOR THE COST TO HAVE A QUALIFIED ARCHAEOLOGIST UNDER CONTRACT TO EVALUATE THE DISCOVERY. IF THE HUMAN REMAINS ARE DETERMINED TO BE OF NATIVE AMERICAN ORIGIN, THE CORONER MUST NOTIFY THE NATIVE AMERICAN HERITAGE COMMISSION WITHIN 24 HOURS OF THIS IDENTIFICATION SO THAT A MOST LIKELY DESCENDANT CAN BE DESIGNATED AND THE APPROPRIATE MEASURES IMPLEMENTED IN COMPLIANCE WITH THE CALIFORNIA GOVERNMENT CODE AND PUBLIC RESOURCES CODE.
5. SHOULD GRADING OPERATIONS ENCOUNTER



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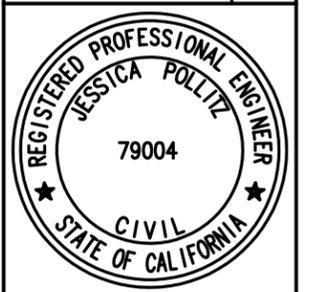
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**HELEN PUTNAM REGIONAL PARK
RAINWATER PROJECT**

NOTES



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C2.0

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HAZARDOUS MATERIAL, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IMMEDIATELY IN THE AFFECTED AREA AND CONTACT 911 OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.

6. GRADING AND DRAINAGE IMPROVEMENTS SHALL BE SET BACK FROM STREAMS, LAKES, PONDS AND WETLANDS IN COMPLIANCE WITH THE REQUIREMENTS OF THE SONOMA COUNTY CODE (SCC). EXISTING VEGETATION SHALL BE RETAINED IN STREAM SETBACK AREAS TO FILTER SOIL AND OTHER POLLUTANTS CARRIED IN STORMWATER.

7. THIS WORK INCLUDES GRADE STAKING, CLEARING AND GRUBBING, REMOVAL AND STOCKPILING OF TOPSOIL, CUT AND FILL TO SUBGRADE, AND REPLACEMENT OF TOPSOIL.

8. MATERIALS: NATIVE BACKFILL: NATIVE SOIL THAT IS APPROVED BY THE ENGINEER MAY BE USED AS BACKFILL. IMPORTED BACKFILL: CLEAN SOIL THAT CAN MEET COMPACTION REQUIREMENTS AS APPROVED BY THE GEOTECHNICAL ENGINEER. COMPACTED FILL: CLEAN NATIVE BACKFILL OR IMPORTED BACKFILL AS APPROVED BY THE GEOTECHNICAL ENGINEER, COMPACTED TO THE SPECIFICATIONS NOTED BELOW. TOPSOIL: TOP LAYER OF SOIL WITHIN GRADING LIMITS SHALL BE SALVAGED, STOCKPILED, AND USED ONSITE AS APPROVED BY ENGINEER. IMPORTED TOPSOIL SHALL BE APPROVED BY ENGINEER.

9. FILL MATERIAL SHALL NOT INCLUDE ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIALS. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL GREATER THAN 6 INCHES IN ANY DIMENSION SHALL BE INCLUDED IN FILLS EXCEPT WHERE APPROVED BY THE GEOTECHNICAL ENGINEER. FILLS SHALL BE CONSTRUCTED IN LIFTS NOT EXCEEDING 8 INCHES IN DEPTH. COMPLETED FILLS SHALL BE STABLE, WILL-INTEGRATED, AND BONDED TO ADJACENT MATERIALS ON WHICH THEY REST. FILLS SHALL BE COMPETENT TO SUPPORT ANTICIPATED LOADS AND BE STABLE AT THE DESIGN SLOPES SHOWN ON THE APPROVED PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

10. ALL EARTHWORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND DETAILS PREPARED BY THE ENGINEER AND THE GEOTECHNICAL REPORT.

11. GROUND SURFACES SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, TOP SOIL, AND OTHER UNSUITABLE MATERIALS, AND SCARIFYING THE GROUND TO PROVIDE A BOND WITH THE FILL MATERIAL.

12. REMOVE TOP 6 INCHES OF TOPSOIL IN ALL AREAS TO BE GRADED. SAVE FOR LATER PLACEMENT. DO NOT OFF HAUL UNLESS NOTED OTHERWISE.

13. EXCAVATIONS SHALL BE CONDUCTED TO THE EXTENT AND DEPTHS SHOWN ON THE PLANS AND DETAILS OR AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

14. COMPACT FILL IN 8 INCH LIFTS WITH 90% RELATIVE COMPACTION, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

15. NO CUT OR FILL SHALL BE STEEPER THAN 2(HORIZONTAL):1(VERTICAL).

16. SPOILS MAY BE SPREAD ON-SITE. COMPACT BY TRACK WALKING WITH TRACKED EQUIPMENT. LOCATION TO BE DETERMINED IN COORDINATION WITH THE OWNER AND ENGINEER. APPLY EROSION CONTROL MEASURES TO ALL SPOILS AREAS.

17. CUT OR FILL TO SUB-GRADE ELEVATIONS. REMOVE ROOTS OR OTHER DELETERIOUS MATERIALS. REMOVE SOIL UNSUITABLE FOR COMPACTION.

18. SCARIFY, MOISTURE CONDITION, AND COMPACT TANK PAD SUB-GRADE USING VIBRATORY COMPACTION EQUIPMENT. FILL IF NECESSARY TO SUB-GRADE ELEVATION WITH AGGREGATE BASE.

15. CONTOURS, ELEVATIONS, AND SHAPES OF FINISHED SURFACES SHALL BE BLENDED WITH ADJACENT NATURAL TERRAIN TO ACHIEVE A CONSISTENT GRADE AND NATURAL APPEARANCE. THE TOP OF CUT SLOPES SHALL BE ROUNDED OFF TO BLEND WITH THE NATURAL TERRAIN. BORDERS OF CUT SLOPES AND FILLS SHALL BE ROUNDED OFF TO A MINIMUM RADIUS OF 5 FEET TO BLEND WITH THE NATURAL TERRAIN.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

1. PERFORM EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH CHAPTER 11 AND 11A OF THE SONOMA COUNTY CODE (SCC).

2. THE APPROVED PLANS SHALL CONFORM TO PERMIT SONOMA EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (CMP'S) GUIDE AS POSTED ON THE PERMIT SONOMA WEBSITE.

3. THE OWNER IS RESPONSIBLE FOR PREVENTING STORMWATER POLLUTION GENERATED FROM THE CONSTRUCTION SITE YEAR ROUND. WORK SITES WITH INADEQUATE EROSION AND SEDIMENT CONTROL MAY BE SUBJECT TO A STOP WORK ORDER.

4. IF DISCREPANCIES OCCUR BETWEEN THESE NOTES, MATERIAL REFERENCED HEREIN OR MANUFACTURER'S RECOMMENDATIONS, THEN THE MOST PROTECTIVE SHALL APPLY.

5. AT ALL TIMES THE OWNER IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE STATE OF CALIFORNIA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORMWATER RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY. CONSTRUCTION ACTIVITIES INCLUDE BUT ARE NOT LIMITED TO CLEARING, GRADING, EXCAVATION, STOCKPILING, AND RECONSTRUCTION OF EXISTING FACILITIES INVOLVING REMOVAL AND REPLACEMENT.

6. THE OWNER MUST IMPLEMENT AN EFFECTIVE COMBINATION OF EROSION PREVENTION AND SEDIMENT CONTROL ON ALL DISTURBED AREAS DURING THE RAINY SEASON (OCTOBER 1 - APRIL 30). CONSTRUCTION GRADING AND DRAINAGE IMPROVEMENTS SHALL BE PERMITTED DURING THE RAINY SEASON ONLY WHEN ON-SITE SOIL CONDITIONS PERMIT THE WORK TO BE PERFORMED IN COMPLIANCE WITH THE SCC. STORMWATER BMP'S SHALL BE IMPLEMENTED AND FUNCTIONAL ON THE SITE AT ALL TIMES DURING THE RAINY SEASON.

7. DURING THE RAINY SEASON, STORM WATER BMP'S REFERENCED OR DETAILED IN PERMIT SONOMA'S BMP GUIDE SHALL BE IMPLEMENTED AND FUNCTIONAL ON THE SITE AT ALL TIMES AND THE AREA OF ERODIBLE LAND EXPOSED AT ANY ONE TIME DURING THE WORK SHALL NOT EXCEED ONE ACRE OR 20 PERCENT OF THE PERMITTED WORK AREA, WHICHEVER IS GREATER, AND

THE TIME OF EXPOSURE SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE.

8. DURING THE NON-RAINY SEASON, ON ANY DAY WHEN THE NATIONAL WEATHER SERVICE FORECAST IS A CHANCE OF RAIN 30% OR GREATER WITHIN THE NEXT 24 HOURS, STORMWATER BMP'S REFERENCED OR DETAILED IN PRMD'S BEST MANAGEMENT PRACTICES GUIDE SHALL BE IMPLEMENTED, INSTALLED, AND FUNCTIONAL ON THE SITE TO PREVENT SOIL AND OTHER POLLUTANT DISCHARGES. AT ALL OTHER TIMES, BMP'S SHOULD BE STORED ONSITE IN PREPARATION FOR INSTALLATION PRIOR TO RAIN EVENTS.

9. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE PROPERTY OWNER BEFORE FORECASTED STORM EVENTS AND AFTER STORM EVENTS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THAT HAVE FAILED OR ARE NO LONGER EFFECTIVE SHALL BE PROMPTLY REPLACED. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.

10. THE LIMITS OF GRADING SHALL BE DEFINED AND MARKED ON SITE TO PREVENT DAMAGE TO SURROUNDING TREES AND OTHER VEGETATION. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE. ANY EXISTING VEGETATION WITHIN THE LIMITS OF GRADING THAT IS TO REMAIN UNDISTURBED BY THE WORK SHALL BE IDENTIFIED AND PROTECTED FROM DAMAGE BY MARKING, FENCING, OR OTHER MEASURES.

11. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS IF THE ALTERNATIVE BMP'S ARE EQUIVALENT OR MORE PROTECTIVE THAN THE BMP'S SHOWN ON THE APPROVED PLANS. ALTERNATIVE BMP'S ARE SUBJECT TO REVIEW AND APPROVAL BY PERMIT SONOMA STAFF.

12. DISCHARGES FROM POTENTIAL POLLUTANTS FROM CONSTRUCTION SITES SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PATHOGENS, PETROLEUM, HYDROCARBONS, METALS, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHEMICALS, HAZARDOUS WASTE, SANITARY WASTE, VEHICLE OR EQUIPMENT WASH WATER, AND CHLORINATED WATER.

13. ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF AT THE END OF EACH WORKING DAY OR MORE FREQUENTLY AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING CONSTRUCTION VEHICLES LEAVING THE SITE ON A DAILY BASIS TO PREVENT DUST, SILT, AND DIRT FROM BEING RELEASED OR TRACKED OFFSITE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AT THE END OF EACH WORKING DAY OR MORE OFTEN AS NECESSARY.

14. ALL DISTURBED AREAS SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES TO THE MAXIMUM EXTENT PRACTICABLE, SUCH AS ESTABLISHING VEGETATION COVERAGE, HYDROSEEDING, STRAW

MULCH, GEOTEXTILES, PLASTIC COVERERS, BLANKETS OR MATS. TEMPORARY OR PERMANENT REVEGETATION SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER VEGETATION REMOVAL BUT IN ALL CASES PRIOR TO OCTOBER 15.

15. WHENEVER IT IS NOT POSSIBLE TO USE EROSION PREVENTION BMP'S ON EXPOSED SLOPES, SEDIMENT CONTROL BMP'S SUCH AS FIBER ROLLS AND SILT FENCES SHALL BE INSTALLED TO PREVENT SEDIMENT MIGRATION. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEYED INTO THE SOIL AND INSTALLED ON CONTOUR. SILT FENCES SHALL BE INSTALLED APPROXIMATELY 2 TO 5 FEET FROM TOE OF SLOPE.

16. HYDROSEEDING SHALL BE CONDUCTED IN A THREE STEP PROCESS. FIRST, EVENLY APPLY SEED MIX AND FERTILIZER TO THE EXPOSED SLOPE. SECOND, EVENLY APPLY MULCH OVER THE SEED AND FERTILIZER. THIRD, STABILIZE THE MULCH IN PLACE. AN EQUIVALENT SINGLE STEP PROCESS, WITH SEED, FERTILIZER, WATER, AND BONDED FIBERS IS ACCEPTABLE.

APPLICATIONS SHALL BE BROADCASTED MECHANICALLY OR MANUALLY AT THE RATES SPECIFIED BELOW. SEED MIX AND FERTILIZER SHALL BE WORKED INTO THE SOIL BY ROLLING OR TAMPING. IF STRAW IS USED AS MULCH, STRAW SHALL BE DERIVED FROM WHEAT, RICE, OR BARLEY AND BE APPROXIMATELY SIX TO EIGHT INCHES IN LENGTH. STABILIZATION OF MULCH SHALL BE DONE HYDRAULICALLY BY APPLYING AN EMULSION OR MECHANICALLY BY CRIMPING OR PUNCHING THE MULCH INTO THE SOIL. EQUIVALENT METHODS AND MATERIALS MAY BE USED ONLY IF THEY ADEQUATELY PROMOTE VEGETATION GROWTH AND PROTECT EXPOSED SLOPES.

16.1. NATIVE SEED MIX: 65 POUNDS/ACRE:
 16.1.1. 25% LEYMUS TRITICOIDES (CREEPING WILD RYE),
 16.1.2. 25% ELMUS GLAUCUS (BLUE WILD RYE),
 16.1.3. 25% FESTUCA RUBRA MOLATE (RED FESCUE),
 16.1.4. 25% NASELLA PULCHARA (PURPLE NEEDLEGRASS).

16.1.5. OR APPROVED EQUAL SEED MIX SIMILAR TO LEBALLISTER'S NATIVE HOLD FAST MIX.

16.1.6. BROADCAST NATIVE PERENNIAL SEED MIXES TO THE SPECIFIED RATES AND MIXES ON CHANNEL SIDE SLOPES. RAKE OR ROLL GROUND SURFACE AFTER BROADCASTING. APPLY AT A RATE OF 2 POUNDS/1,000 SF.

16.2. QUALITY ASSURANCE: PRODUCT DATA SUBMITTALS SHALL BE APPROVED BY ENGINEER.

16.3. IN ALL DISTURBED AREAS, SPREAD SEED AND STRAW TO COVER DISTURBED AREA EVENLY.

17. STRAW WATTLE: BIODEGRADABLE WEED-FREE STRAW WATTLE.

18. DUST CONTROL SHALL BE PROVIDED BY CONTRACTOR DURING ALL PHASES OF CONSTRUCTION.

19. STORM DRAIN INLETS SHALL BE PROTECTED FROM POTENTIAL POLLUTANTS UNTIL DRAINAGE CONVEYANCE SYSTEMS ARE FUNCTIONAL AND CONSTRUCTION HAS BEEN COMPLETED.

20. ENERGY DISSIPATORS SHALL BE INSTALLED AT STORM DRAIN OUTLETS WHICH MAY CONVEY EROSION STORM WATER FLOW.

21. SOIL, MATERIAL STOCKPILES, AND FERTILIZING



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MATERIAL SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.

22. SOLID WASTE, SUCH AS TRASH, DISCARDED BUILDING MATERIALS AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY OR AS NECESSARY. REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE COORDINATED BY THE CONTRACTOR.

23. A CONCRETE WASHOUT AREA SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS. NO WASHOUT OF CONCRETE, MORTAR MIXERS, OR TRUCKS SHALL BE ALLOWED ON SOIL. CONCRETE WASTE SHALL BE PROPERLY DISPOSED.

24. PROPER APPLICATION, CLEANING, AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.

25. TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED DURING CONSTRUCTION ACTIVITIES TO PREVENT THE DISCHARGE OF POLLUTANTS.

26. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE, AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.

27. SHORT-TERM EROSION CONTROL SHALL CONSIST OF STOCKPILING SOIL OR OTHER MATERIALS IN AREAS WHERE THEY WILL NOT BE ERODED BY WIND OR RAIN. IF RAIN OCCURS WHILE THE SOIL IS TEMPORARILY STOCKPILED, THE STOCKPILE SHALL BE COVERED WITH PLASTIC, AND SECURED IN PLACE TO ENSURE THAT SOIL IS PROTECTED FROM RAIN AND WIND. SILT FENCING OR WATTLES SHALL BE INSTALLED ON CONTOUR AROUND ALL STOCKPILE LOCATIONS. AT THE END OF EACH WORK DAY, SOIL PILES SHALL BE STABILIZED.

28. ALL MATERIALS AND COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF THE RWQCB FIELD MANUAL, THE CASQA STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK, THESE SPECIFICATIONS, AND AS INDICATED ON THE CONSTRUCTION DRAWINGS.

MATERIAL SPECIFICATIONS

1. ALL MATERIALS SHALL MEET OR EXCEED ALL APPLICABLE REFERENCED STANDARDS, FEDERAL STATE AND LOCAL REQUIREMENTS, AND CONFORM TO CODES AND ORDINANCES OF AUTHORITIES HAVING JURISDICTION.

2. REPAIR ANY DAMAGE TO TURFGRASS, INFRASTRUCTURE, FENCING, AND UTILITIES CAUSED BY CONSTRUCTION ACTIVITIES IN THE PROJECT AREA AND ACCESS AREAS.

3. PROJECT SUBMITTALS INCLUDE: SHOP DRAWINGS, MANUFACTURER'S WARRANTIES, OPERATION AND MAINTENANCE DATA, FOR THE FOLLOWING:

- 3.1. TANK
 - 3.1.1. TANK CONNECTIONS
 - 3.1.2. TANK COLOR
 - 3.1.3. GUTTERS AND FIRST FLUSH
- 3.2. PIPE AND PIPE FITTING MATERIALS

- 3.3. TANK GRAVEL PAD MATERIAL
- 3.4. ROCK OVERFLOW MATERIAL
- 3.5. CARPORT
- 3.6. GUTTERS
- 3.7. PUMP
- 3.8. FLAP VALVE
- 3.9. ELECTRICALLY ACTUATED VALVE
- 3.10. MASONRY RETAINING WALL MATERIALS AND COLOR
- 3.11. SPLIT RAIL FENCE MATERIAL
- 3.12. CLEANOUTS, VALVE BOXES, AND LIDS

4. CARPORT
- 4.1. FREESTANDING METAL BUILDING AND ENGINEERING, DESIGNED TO MEET CURRENT CALIFORNIA BUILDING CODES: 16'X75' WITH THREE ENCLOSED SIDES AND ONE SIDE OPEN.
 - 4.2. EAVE HEIGHT: 12'
 - 4.3. ROOF: SINGLE PITCH ROOF WITH 2 FT OVERHANG AND GUTTER
 - 4.4. COLOR: TO BE APPROVED BY OWNER.
 - 4.5. FOUNDATION
 - 4.5.1. REINFORCED CONCRETE PIER FOUNDATIONS.
 - 4.5.2. COORDINATE FOUNDATION DESIGN WITH BUILDING MANUFACTURER, ENGINEER, AND GEOTECHNICAL ENGINEER.

5. RETAINING WALL: 4 FT HEIGHT MASONRY RETAINING WALL PER DETAIL.
- 5.1. DRAIN ROCK: 1/2" MINUS DRAIN ROCK.
 - 5.2. WALL BACK DRAIN: 4" DIAMETER PERFORATED SCH 40 PVC PIPE, HOLES FACING DOWN
 - 5.3. CINDER BLOCK: 8" BLOCK HEIGHT
 - 5.4. GROUT: MIN. 2000 PSI GROUT.
 - 5.5. REBAR: SIZE PER DETAIL.
 - 5.6. REINFORCED CONCRETE FOOTING: MIN. 2500 PSI CONCRETE, PER DETAIL.

6. ALL PIPE, ABOVE GROUND PIPE, SHALL BE SCH 40 GALVANIZED STEEL UNLESS NOTED OTHERWISE. ALL BURIED PIPE SHALL BE SCH 40 PVC UNLESS NOTED OTHERWISE.

- 6.1. TRANSITION FROM PVC TO GALVANIZED STEEL SHALL OCCUR MIN. 18 INCHES BELOW GROUND.
- 6.2. ALL UNDERGROUND PIPES IN AREAS RECEIVING VEHICULAR TRAFFIC SHALL HAVE A MINIMUM 24 INCHES OF SOIL OVER TOP OF PIPE AND SHALL HAVE A MINIMUM 18 INCHES OF SOIL COVER OVER TOP OF PIPE IN ALL OTHER AREAS EXCEPT WHERE NOTED ON PLANS. BACKFILL AND COMPACT SOIL IN ALL TRENCHES TO FINISH GRADE.
- 6.3. FOLLOW PIPE MFG STANDARD REQUIREMENTS FOR SUPPORT TYPES AND DISTANCES.
- 6.4. WARNING TAPE SHALL READ "NON-POTABLE RAINWATER".
- 6.5. ABOVE GROUND PVC PIPE SHALL BE PAINTED WITH PLASTIC BASED PAINT TO MATCH BUILDING PAINT COLOR.

7. INSTALL PIPE INSULATION ON ALL PIPE SMALLER THAN 2" ABOVE-GROUND PIPE.

8. MISCELLANEOUS FITTINGS TO INSTALL INLET, OUTLET, AND OVERFLOW.
- 8.1. BULK HEADS ARE SUPPLIED AND INSTALLED BY TANK MFG FOR METAL TANKS. SEE TANK DETAILS FOR SIZES AND CONNECTION TYPES.

9. 5,000 GALLON CORRUGATED METAL TANK. BH CLASSIC CORRUGATED GALVANIZED STEEL CYLINDRICAL TANK OR ENGINEER APPROVED EQUIVALENT.

- 9.1. TANK SHALL BE 10'-6" INSIDE DIAMETER WITH 7'-6" SHELL HEIGHT.
- 9.2. TANK ROOF SHALL INCLUDE GUTTERS, FIRST FLUSH DIVERSION SYSTEM, AND SCREENED ENTRANCE INTO TANK FOR RAINWATER CATCHMENT.

- 9.3. LINER SHALL BE PVC, NSF 61 RATED FOR POTABLE WATER.
- 9.4. WATER LEVEL INDICATOR INCLUDED FROM TANK MANUFACTURER: 6-INCH REVERSE LEVEL INDICATOR.
- 9.5. PIPE OPENINGS PER PLAN
- 9.6. TANKS SHALL HAVE 24" ROOF AND SHELL PERSON ACCESS
- 9.7. USE UNISTRUT OR SIMILAR AND GALVANIZED PIPE CLAMPS TO SUPPORT PIPE WHERE NEEDED.
- 9.8. COLOR: EXTERIOR POWDER COAT FINISH, COLOR APPROVED BY OWNER.

7. 41,000 GALLON CORRUGATED METAL TANK. BH CLASSIC CORRUGATED GALVANIZED STEEL CYLINDRICAL TANK OR ENGINEER APPROVED EQUIVALENT.

- 7.1. TANK SHALL BE 27' INSIDE DIAMETER WITH 7'-3" SHELL HEIGHT.
- 7.2. TANK ROOF SHALL INCLUDE GUTTERS, FIRST FLUSH DIVERSION SYSTEM, AND SCREENED ENTRANCE INTO TANK FOR RAINWATER CATCHMENT.
- 7.3. LINER SHALL BE PVC, NSF 61 RATED FOR POTABLE WATER.
- 7.4. WATER LEVEL INDICATOR INCLUDED FROM TANK MANUFACTURER: 6-INCH REVERSE LEVEL INDICATOR.
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- 7.8. COLOR: EXTERIOR POWDER COAT FINISH, COLOR APPROVED BY OWNER.

8. VALVES SHALL BE BRASS BALL VALVES WHERE NOTED ON PLANS.

9. GRAVEL PAD SUPPORTING WATER TANKS SHALL BE CONSTRUCTED PER STRUCTURAL PLANS PREPARED BY THE TANK ENGINEER, THIS INCLUDES GRAVEL SPECIFICATIONS.

- 9.1. AGGREGATE BASE ROCK: CALTRANS 3/4" CLASS 2 AGGREGATE BASE CONFORMING TO THE REQUIREMENTS OF SECTION 26 IN THE CALTRANS STANDARD SPECIFICATIONS.
- 9.2. GRAVEL PAD SHALL BE ENCIRCLED BY 6" METAL RING PROVIDED BY TANK MANUFACTURER.

10. INSTALL SYSTEM COMPONENTS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

11. VALVE BOXES
- 11.1. NDS OR APPROVED EQUIVALENT IN NON-TRAFFICKED AREAS.
 - 11.2. OLDCASTLE WITH TRAFFIC RATED LID OR APPROVED EQUIVALENT IN ALL AREAS RECEIVING VEHICULAR TRAFFIC.

12. GUTTERS. WEATHER RESISTANT METAL GUTTERS WITH SCREENS, SHAPE AND SIZE TO BE APPROVED BY OWNER AND ENGINEER.

13. TANK FILL AND OVERFLOW SYSTEM

- 13.1. MISCELLANEOUS PIPE STRAPS AND HARDWARE REQUIRED TO ATTACH TANK FILL AND OVERFLOW PIPES.

13.2. FLEXIBLE PIPE AT TANK CONNECTIONS PER TANK MANUFACTURER.

- 13.3. 4" ELECTRONIC ACTUATED BALL VALVE WITH FLOATS AND CONTROLS. 115V. DYNAQUIP MODEL EHH2BATE01, OR APPROVED EQUIVALENT.
 - 13.3.1. WITH MANUAL OVER RIDE
 - 13.3.2. SHALL BE NORMALLY OPEN, SPRING RETURN

13.3.3. TO CLOSE WHEN POWER IS OFF. INSTALL FLOAT SWITCH IN 5,000 GAL TANK TO CONTROL THE VALVE.

- 13.4. FIRST FLUSH SYSTEM
- 13.4.1. REMOVE AND DISPOSE OF (E) DOWNSPOUTS.
 - 13.4.2. INSTALL FIRST FLUSH DIVERSION AND DOWNSPOUT SCREEN AS SHOWN ON PLANS AND ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
 - 13.4.3. DRILL, TAP, AND INSTALL 1/4" BRASS BALL VALVE ON EXPOSED FIRST FLUSH DEVICE.

13.5. FILL SYSTEM DRAIN OPTION, SEE PLAN SET FOR DIRECTION.

- 13.5.1. INSTALL A DRAIN ON ALL LOW POINTS IN THE FILL SYSTEM. SEE DRAIN DETAIL.
- 13.5.2. CONNECT THE FILL PIPE TO THE DRAIN PIPE UNDERGROUND WITH A 2" VALVE IN A VALVE BOX.
- 13.5.3. IF FILL PIPE AND DRAIN PIPE ARE NOT THE LOW POINT IN THE FILL LINE, INSTALL 2" VALVE TO 1 CUBIC FOOT GRAVEL PIT AT LOW POINT IN THE FILL PIPE.

13.6. TANK OVERFLOW

- 13.6.1. SCREENED OR SOLID METAL FLAP VALVE, AGRDRAIN OR APPROVED EQUIVALENT.

13.7. DRAIN DISCHARGE FEATURE:

- 13.7.1. ROCK RIP RAP: 4-6 INCH COBBLES.
 - 13.7.1.1. SEE DETAIL

14. DISTRIBUTION SYSTEM

- 14.1. PUMP: GOULDS 3/4 HP J7S BOOSTER PUMP RATED FOR TDH = 70 FT, FLOW = 15 GPM, OR APPROVED EQUIVALENT.

14.2. PRESSURE TANK: 83.5 GALLON GOULDS PRESSURE TANK, OR APPROVED EQUIVALENT.

14.3. FILTER: TWISTICLEAN T2C-150 WITH 140 MESH SCREEN AND SLEEVE TO COVER FILTER, OR APPROVED EQUIVALENT.

14.4. CONCRETE SLAB: QUICKCRETE 1101, 4,000 PSI, STEEL REINFORCEMENT: #4, GRADE 40 AT 12 INCHES ON CENTER.

14.5. PUMP FLOATS, SWITCHES, ELECTRIC PANEL, AND OTHER PARTS AND FITTINGS AS NECESSARY.

- 14.5.1. PUMP FLOAT OFF SWITCH

14.1. WATER METER- NETAFIM M SERIES OR BADGER MODEL 55, OR APPROVED EQUIVALENT.

- 14.1.1. NETAFIM SPEC: 1.5" M, 36M401.5T.
 - 14.1.1.1. INCLUDE REED SWITCH REGISTER CABLE.
- 14.1.2. BADGER SPEC: MODEL 55, 1", DIRECT READ, GALLON.

14.2. LOOSE KEY HOSE BIBB: LEAD-FREE METAL HOSE BIBB.

15. FIRE HOSE CONNECTION SYSTEM

15.1. FIRE HOSE CONNECTIONS AND PIPES SUPPLYING FIRE HYDRANT AT BOTH TANKS SHALL BE FITTED WITH ANTI-VORTEX PLATES PER NFPA 22 (2018) SEC. 14.2.13. ANTI-VORTEX PLATE ASSEMBLY SHALL CONSIST OF A HORIZONTAL RIGID PLATE AT LEAST TWICE THE DIAMETER OF THE OUTLET MOUNTED AT A DISTANCE ABOVE THE BOTTOM OF THE TANK EQUAL TO ONE HALF OF DIAMETER OF THE DISCHARGE PIPE, MINIMUM 6 INCHES ABOVE THE BOTTOM OF THE TANK.

- 15.2. FOR 5,000 GALLON TANK: HYDRANT SHALL HAVE ONE (1) 2-1/2" OUTLET WITH MALE NATIONAL HOSE THREADS AND A CAP.
- 15.3. FOR 41,000 GALLON TANK: HYDRANT SHALL HAVE ONE (1) 4-1/2" OUTLET WITH MALE NATIONAL HOSE THREADS AND A 4-12" BY 2-1/2" REDUCER WITH CAP AND BE PROTECTED BY TWO BOLLARDS.
- 15.4. FIRE HYDRANT SHALL COMPLY WITH SONOMA COUNTY FIRE SAFE STANDARDS DRAWING F3, SEE DETAIL 3/SHT C4.4.
- 16.FENCING. WOODEN SPLIT RAIL FENCE, WESTERN RED CEDAR. STYLE AND LAYOUT TO BE APPROVED BY OWNER OWNER.
- 17.INSTALL PROJECT COMPONENTS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 18.INSTALL WATER TANKS, PIPING, VALVES, WATER LEVEL INDICATOR, AND HOSE BIB ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND PLANS.
- 19.INSTALL NON-POTABLE SIGNAGE AT ALL TANKS, HOSE-BIBBS, AND FIRE HYDRANTS, SEE DETAIL 3/SHT C4.3.

UTILITY NOTES

- 1. ALL EXISTING UTILITIES TO REMAIN IN THE WORK AREA SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE.
- 2. ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE SONOMA COUNTY CODES, ORDINANCES, ZONING AND BUILDING LAWS INCLUDING THE LATEST ADOPTED EDITION OF THE CALIFORNIA BUILDING CODE.
- 3. CONTRACTOR SHALL EXPOSE, BY POTHOLING, AND VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES, INCLUDING STORM DRAINS, SANITARY SEWERS AND WATER LINES BEFORE ORDERING MATERIALS AND/OR CONSTRUCTING NEW FACILITIES.
- 4. ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION. SEE GENERAL NOTES.
- 5. CONTRACTOR TO PROVIDE SHOP DRAWINGS, IF NECESSARY, FOR APPROVAL OF SYSTEM COMPONENTS NOT SHOWN ON THE PLANS.
- 6. ALL UNDERGROUND PIPES SHALL HAVE A MINIMUM 24 INCHES OF SOIL COVER OVER TOP OF PIPE IN DRIVEABLE AREAS, OTHERWISE 18 INCHES OF SOIL COVER OVER TOP OF PIPE EXCEPT WHERE NOTED ON PLANS. BACKFILL AND COMPACT SOIL IN ALL TRENCHES TO FINISH GRADE.



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OVERALL SITE PLAN

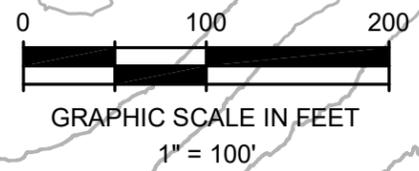
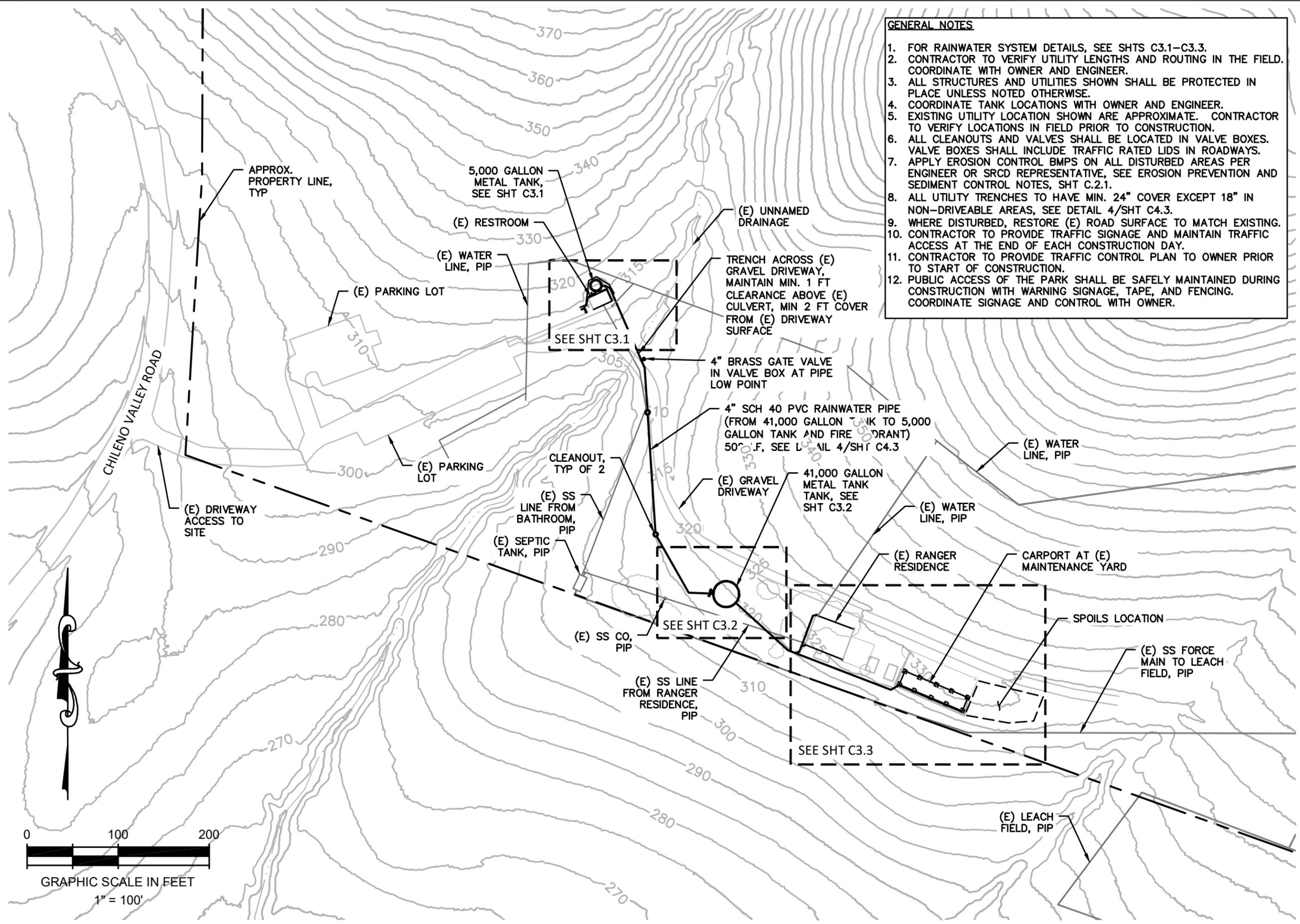


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- GENERAL NOTES**
- FOR RAINWATER SYSTEM DETAILS, SEE SHTS C3.1-C3.3.
 - CONTRACTOR TO VERIFY UTILITY LENGTHS AND ROUTING IN THE FIELD. COORDINATE WITH OWNER AND ENGINEER.
 - ALL STRUCTURES AND UTILITIES SHOWN SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
 - COORDINATE TANK LOCATIONS WITH OWNER AND ENGINEER.
 - EXISTING UTILITY LOCATION SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS IN FIELD PRIOR TO CONSTRUCTION.
 - ALL CLEANOUTS AND VALVES SHALL BE LOCATED IN VALVE BOXES. VALVE BOXES SHALL INCLUDE TRAFFIC RATED LIDS IN ROADWAYS.
 - APPLY EROSION CONTROL BMPs ON ALL DISTURBED AREAS PER ENGINEER OR SRCD REPRESENTATIVE, SEE EROSION PREVENTION AND SEDIMENT CONTROL NOTES, SHT C.2.1.
 - ALL UTILITY TRENCHES TO HAVE MIN. 24" COVER EXCEPT 18" IN NON-DRIVEABLE AREAS, SEE DETAIL 4/SHT C4.3.
 - WHERE DISTURBED, RESTORE (E) ROAD SURFACE TO MATCH EXISTING.
 - CONTRACTOR TO PROVIDE TRAFFIC SIGNAGE AND MAINTAIN TRAFFIC ACCESS AT THE END OF EACH CONSTRUCTION DAY.
 - CONTRACTOR TO PROVIDE TRAFFIC CONTROL PLAN TO OWNER PRIOR TO START OF CONSTRUCTION.
 - PUBLIC ACCESS OF THE PARK SHALL BE SAFELY MAINTAINED DURING CONSTRUCTION WITH WARNING SIGNAGE, TAPE, AND FENCING. COORDINATE SIGNAGE AND CONTROL WITH OWNER.



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41,000 GAL TANK PLAN

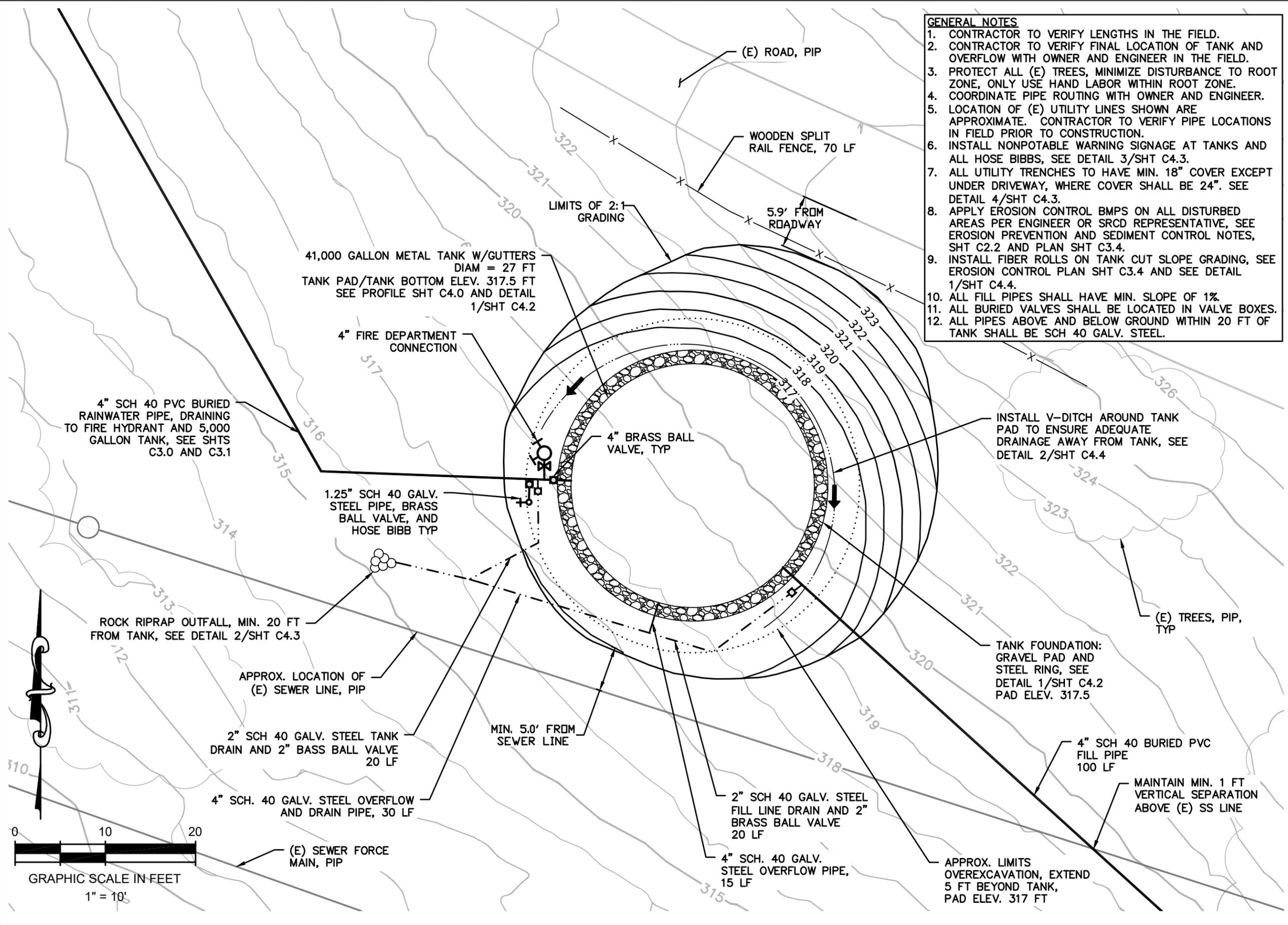


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- GENERAL NOTES**
1. CONTRACTOR TO VERIFY LENGTHS IN THE FIELD.
 2. CONTRACTOR TO VERIFY FINAL LOCATION OF TANK AND OVERFLOW WITH OWNER AND ENGINEER IN THE FIELD.
 3. PROTECT ALL (E) TREES, MINIMIZE DISTURBANCE TO ROOT ZONE, ONLY USE HAND LABOR WITHIN ROOT ZONE.
 4. COORDINATE PIPE ROUTING WITH OWNER AND ENGINEER.
 5. LOCATION OF (E) UTILITY LINES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY PIPE LOCATIONS IN FIELD PRIOR TO CONSTRUCTION.
 6. INSTALL NONPOTABLE WARNING SIGNAGE AT TANKS AND ALL HOSE BIBBS, SEE DETAIL 3/SHT C4.3.
 7. ALL UTILITY TRENCHES TO HAVE MIN. 18" COVER EXCEPT UNDER DRIVEWAY, WHERE COVER SHALL BE 24". SEE DETAIL 4/SHT C4.3.
 8. APPLY EROSION CONTROL BMPs ON ALL DISTURBED AREAS PER ENGINEER OR SRCD REPRESENTATIVE, SEE EROSION PREVENTION AND SEDIMENT CONTROL NOTES, SHT C2.2 AND PLAN SHT C3.4.
 9. INSTALL FIBER ROLLS ON TANK CUT SLOPE GRADING, SEE EROSION CONTROL PLAN SHT C3.4 AND SEE DETAIL 1/SHT C4.4.
 10. ALL FILL PIPES SHALL HAVE MIN. SLOPE OF 1%.
 11. ALL BURIED VALVES SHALL BE LOCATED IN VALVE BOXES.
 12. ALL PIPES ABOVE AND BELOW GROUND WITHIN 20 FT OF TANK SHALL BE SCH 40 GALV. STEEL.



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41,000 GAL TANK PLAN

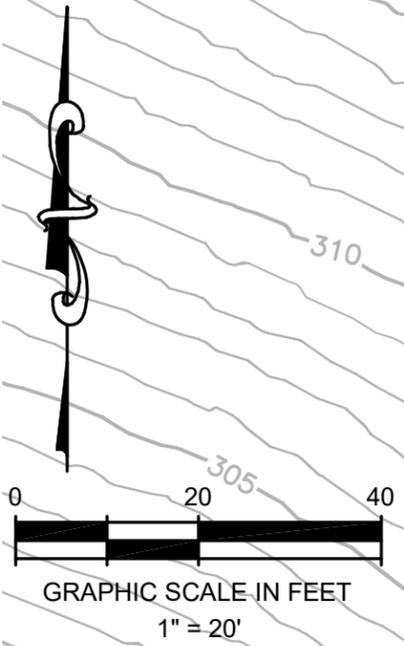
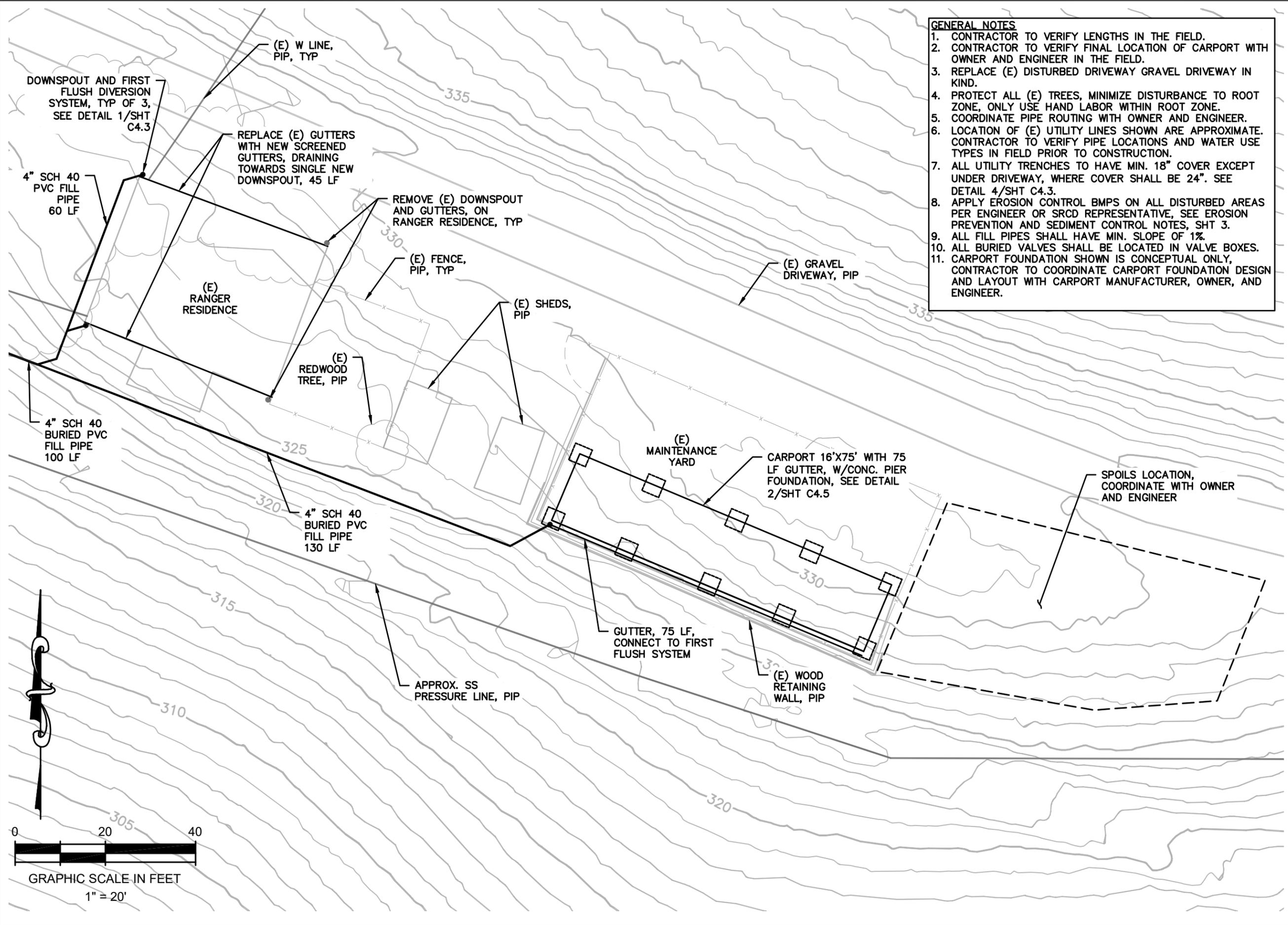


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C3.3

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- GENERAL NOTES**
1. CONTRACTOR TO VERIFY LENGTHS IN THE FIELD.
 2. CONTRACTOR TO VERIFY FINAL LOCATION OF CARPORT WITH OWNER AND ENGINEER IN THE FIELD.
 3. REPLACE (E) DISTURBED DRIVEWAY GRAVEL DRIVEWAY IN KIND.
 4. PROTECT ALL (E) TREES, MINIMIZE DISTURBANCE TO ROOT ZONE, ONLY USE HAND LABOR WITHIN ROOT ZONE.
 5. COORDINATE PIPE ROUTING WITH OWNER AND ENGINEER.
 6. LOCATION OF (E) UTILITY LINES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY PIPE LOCATIONS AND WATER USE TYPES IN FIELD PRIOR TO CONSTRUCTION.
 7. ALL UTILITY TRENCHES TO HAVE MIN. 18" COVER EXCEPT UNDER DRIVEWAY, WHERE COVER SHALL BE 24". SEE DETAIL 4/SHT C4.3.
 8. APPLY EROSION CONTROL BMPs ON ALL DISTURBED AREAS PER ENGINEER OR SRCO REPRESENTATIVE, SEE EROSION PREVENTION AND SEDIMENT CONTROL NOTES, SHT 3.
 9. ALL FILL PIPES SHALL HAVE MIN. SLOPE OF 1%.
 10. ALL BURIED VALVES SHALL BE LOCATED IN VALVE BOXES.
 11. CARPORT FOUNDATION SHOWN IS CONCEPTUAL ONLY, CONTRACTOR TO COORDINATE CARPORT FOUNDATION DESIGN AND LAYOUT WITH CARPORT MANUFACTURER, OWNER, AND ENGINEER.



EROSION CONTROL NOTES

1. CONTRACTOR TO VERIFY EROSION CONTROL MEASURES WITH OWNER AND ENGINEER.
2. APPLY EROSION CONTROL BMPs ON ALL DISTURBED AREAS PER ENGINEER OR SRCd REPRESENTATIVE, SEE EROSION PREVENTION AND SEDIMENT CONTROL NOTES, SHT C.2.1.
3. PROTECT ALL (E) TREES, MINIMIZE DISTURBANCE AND USE HAND DIGGING WITHIN ROOT ZONE.
4. INSTALL FIBER ROLLS ON CONTOUR.
5. CONTRACTOR SHALL CLEAR DEBRIS AND SEDIMENT FROM PAVED PORTION OF ENTRANCE ROAD DAILY.

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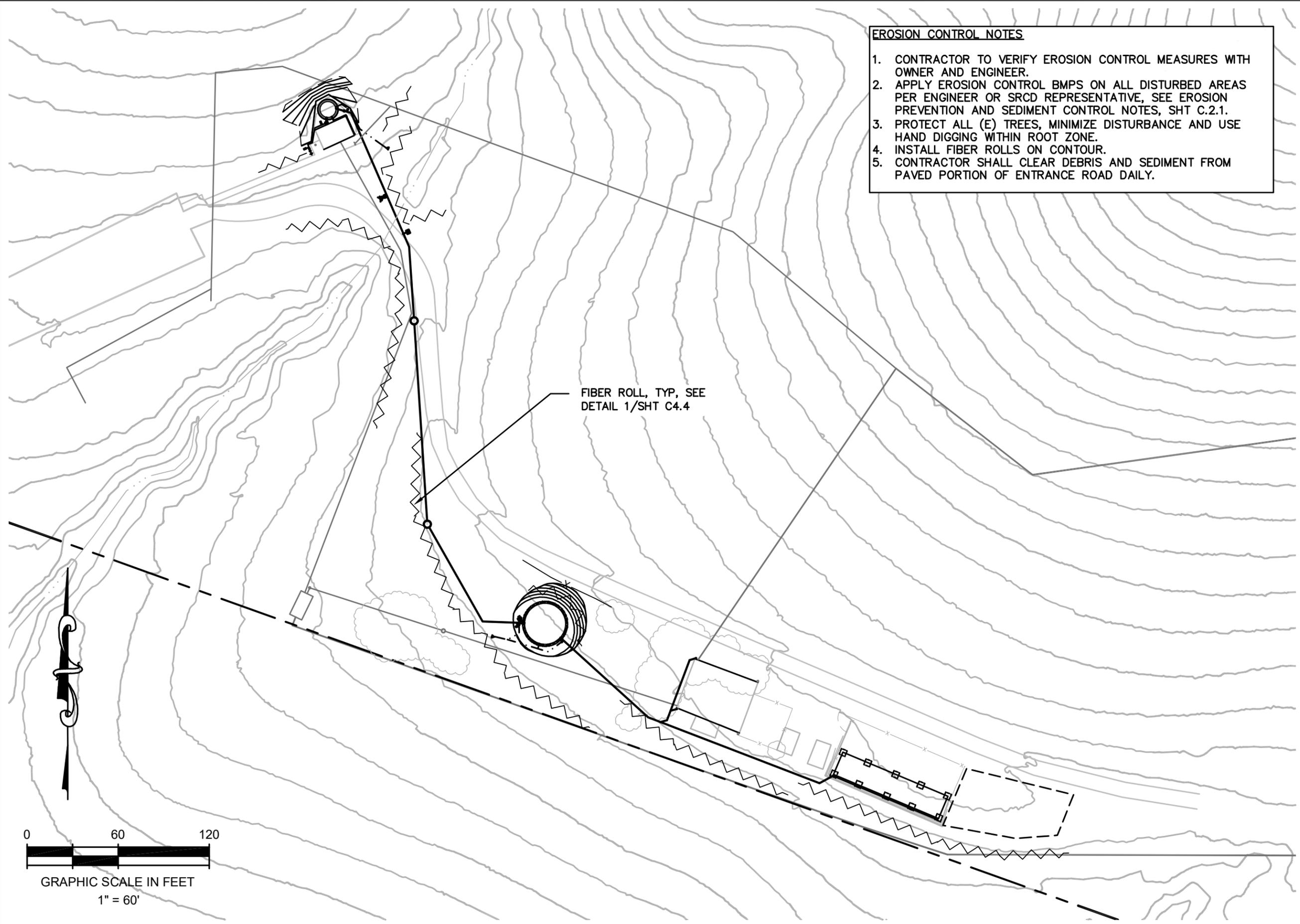
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EROSION CONTROL PLAN

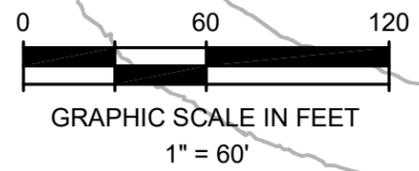


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C3.4



FIBER ROLL, TYP, SEE
DETAIL 1/SHT C4.4



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41,000 GAL TANK PROFILE

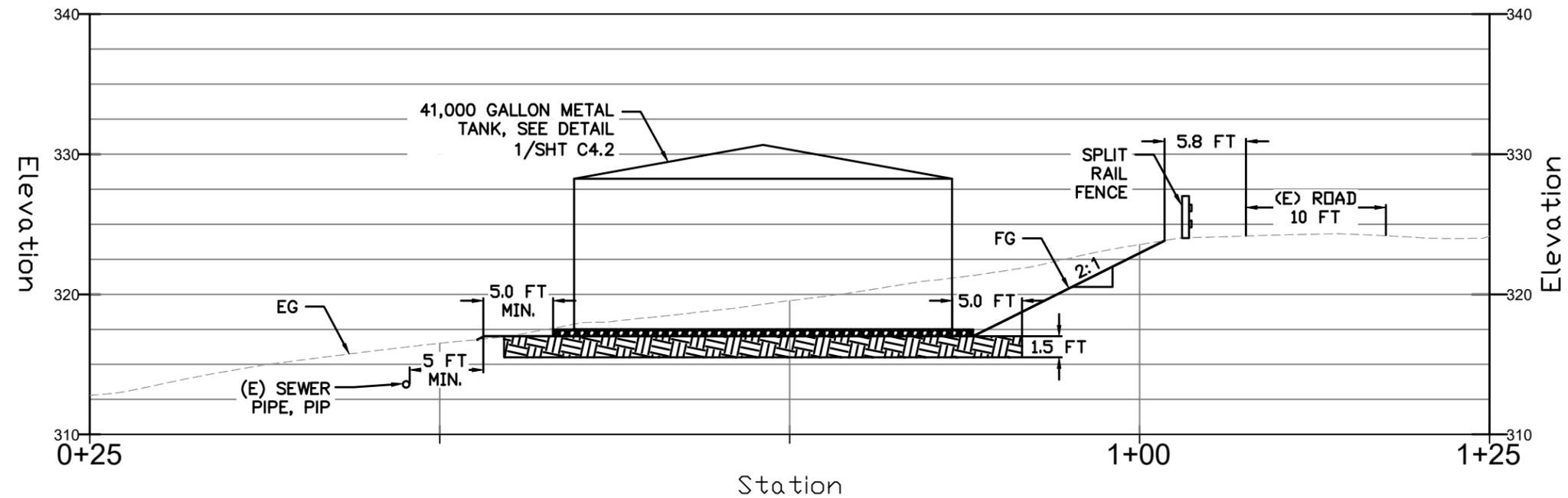


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Profile View of 41K TANK



NOTES:

1. THE EDGE OF GRAVEL TANK PAD SHALL BE LOCATED A MINIMUM OF 5 FT FROM THE START OF THE TANK CUT PAD SLOPE.
2. OVER EXCAVATE 5 FT HORIZONTALLY BEYOND THE TANK, PER GEOTECHNICAL ENGINEER.
3. SEE SHT C4.2 FOR TANK DETAIL.

41,000 GAL TANK PROFILE

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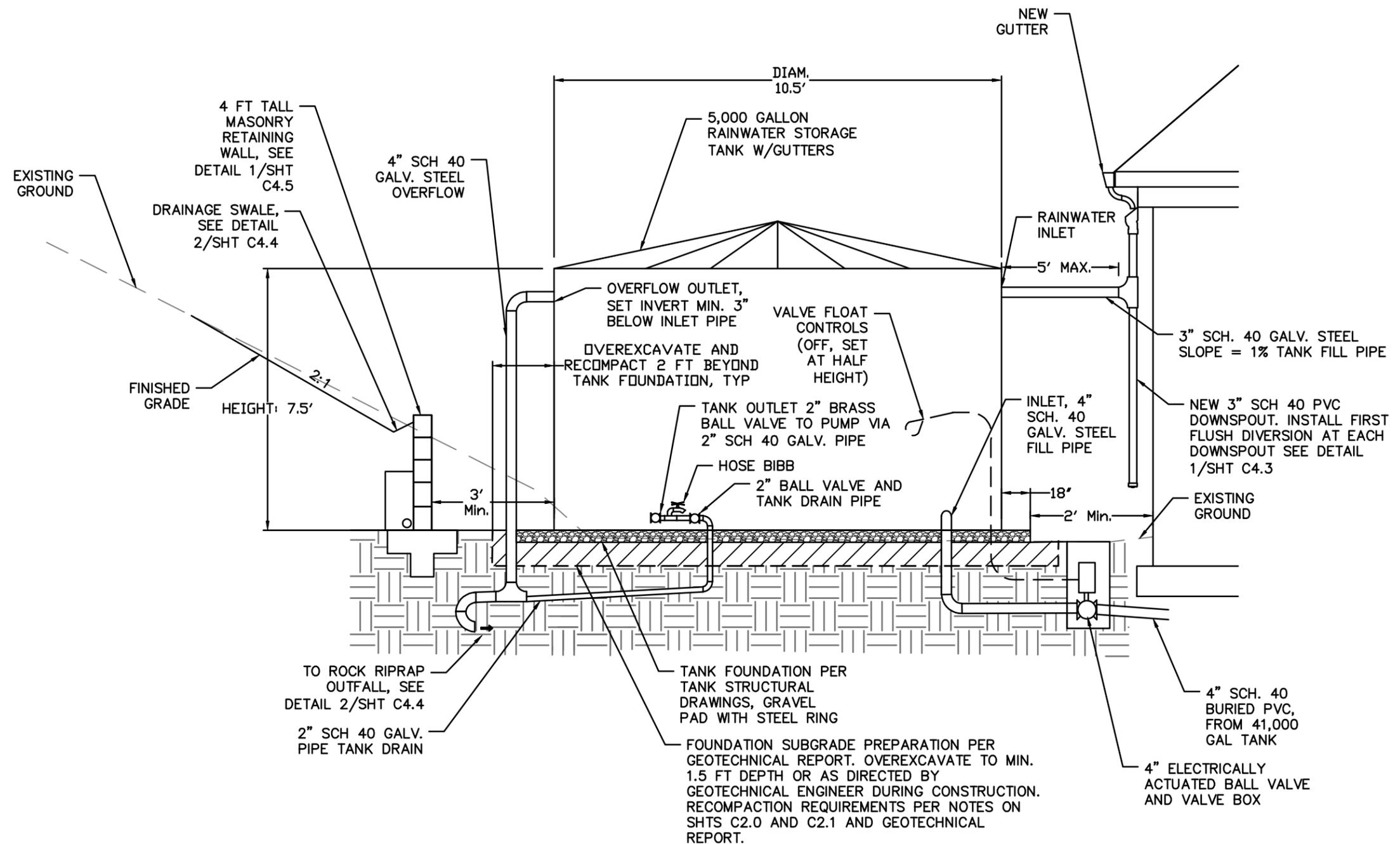
DETAILS



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C4.1

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NOTES:

1. ALL UNDERGROUND PIPES SHALL HAVE A MINIMUM 24 INCHES OF SOIL COVER OVER TOP OF PIPE EXCEPT WHERE NOTED ON PLANS. BACKFILL AND COMPACT SOIL IN ALL TRENCHES TO FINISH GRADE.
2. INSTALL TANK FILL, DRAIN, AND OVERFLOW PIPES AS SHOWN ON PLANS.
3. ALL ABOVE AND BELOW GROUND PIPING WITHIN 20 FT OF TANK SHALL BE SCH 40 GALV. STEEL.
4. ALL CONNECTIONS TO TANK SHALL MEET TANK MANUFACTURER'S REQUIREMENTS.

TANK DETAIL - 5,000 GALLON

1

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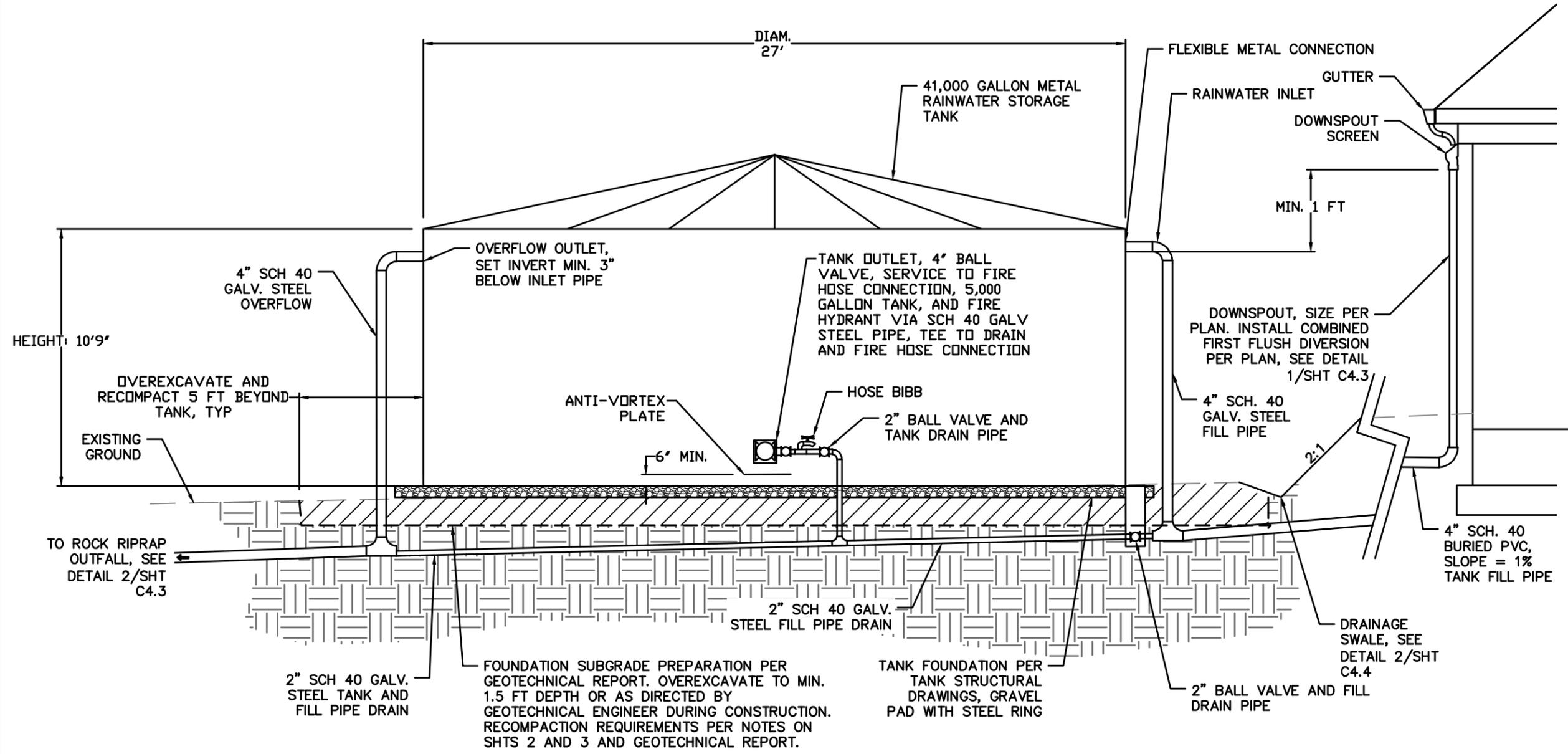
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RAINWATER PROJECT

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C4.2



- NOTES:**
1. ALL UNDERGROUND PIPES SHALL HAVE A MINIMUM 24 INCHES OF SOIL COVER OVER TOP OF PIPE EXCEPT WHERE NOTED ON PLANS. BACKFILL AND COMPACT SOIL IN ALL TRENCHES TO FINISH GRADE.
 2. INSTALL TANK FILL, DRAIN, AND OVERFLOW PIPES AS SHOWN ON PLANS.
 3. ALL ABOVE AND BELOW GROUND PIPING WITHIN 20 FT OF TANK SHALL BE SCH 40 GALV. STEEL.
 4. ALL CONNECTIONS TO TANK SHALL MEET TANK MANUFACTURER'S REQUIREMENTS.
 5. FOR TANK PAD GRADING DETAILS, SEE TANK PROFILE SHT C4.0.

TANK DETAIL - 41,000 GALLON

1

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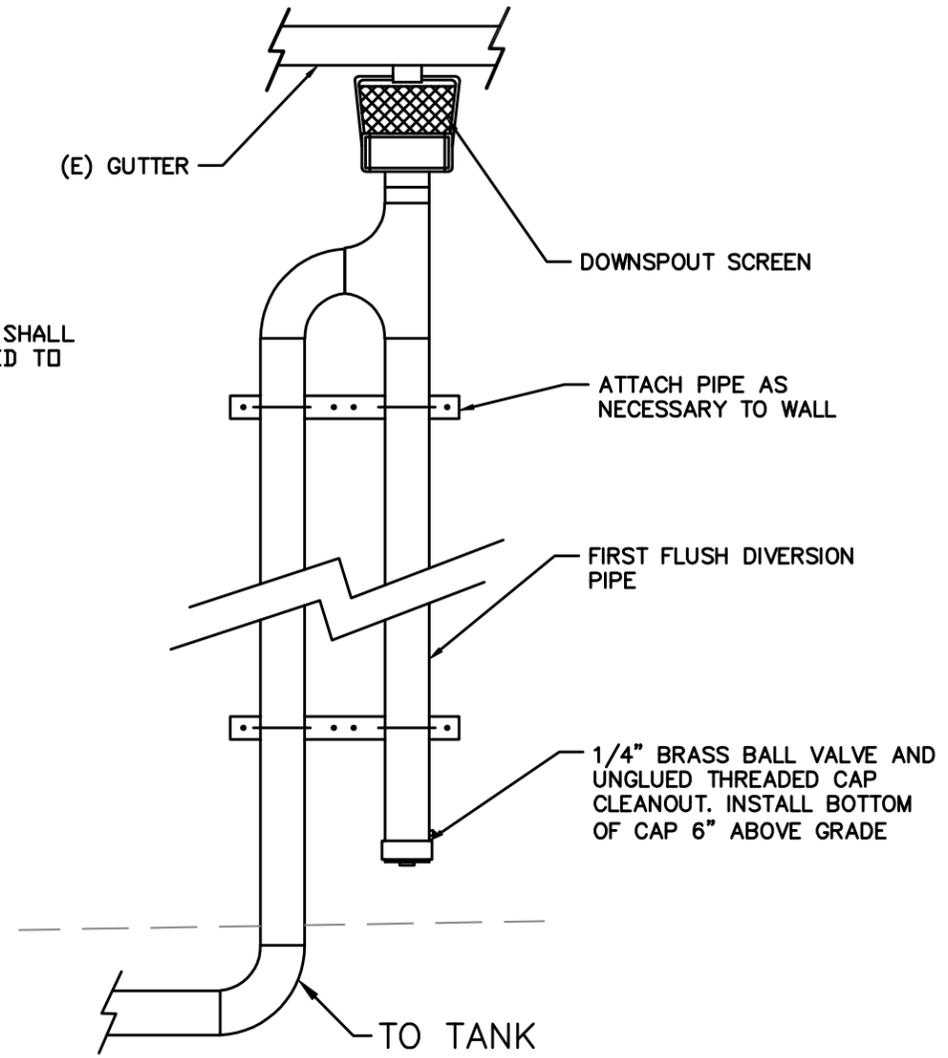
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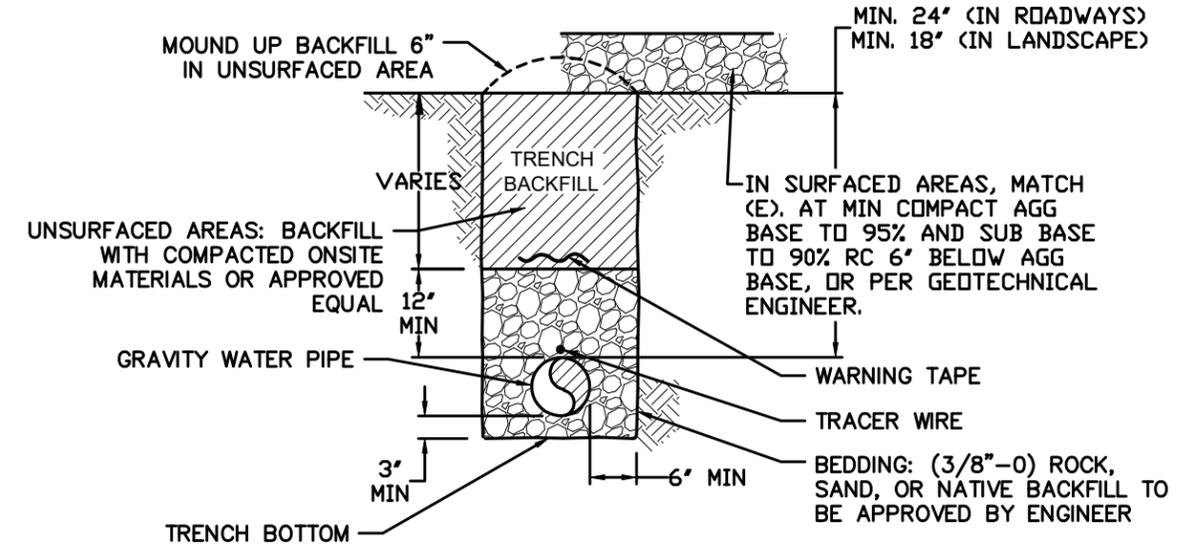


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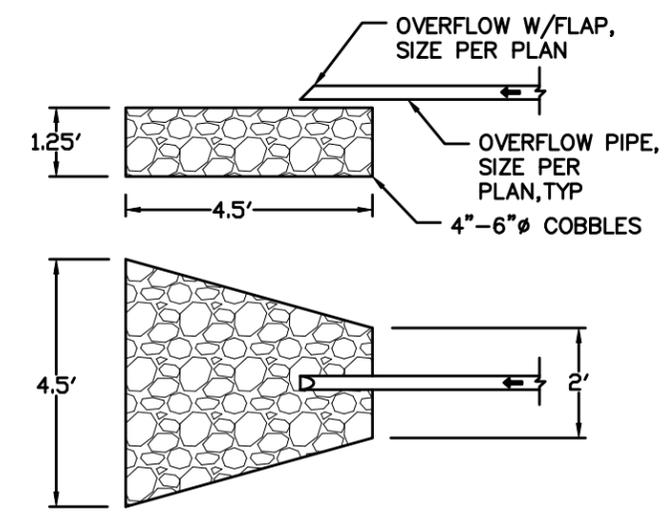
NOTE:
1. FIRST FLUSH MATERIAL SHALL BE SCH 40 PVC, PAINTED TO MATCH BUILDING COLOR.



FIRST FLUSH DIVERSION ①
NTS



TYPICAL UTILITY PIPE TRENCH SECTION ④
NTS

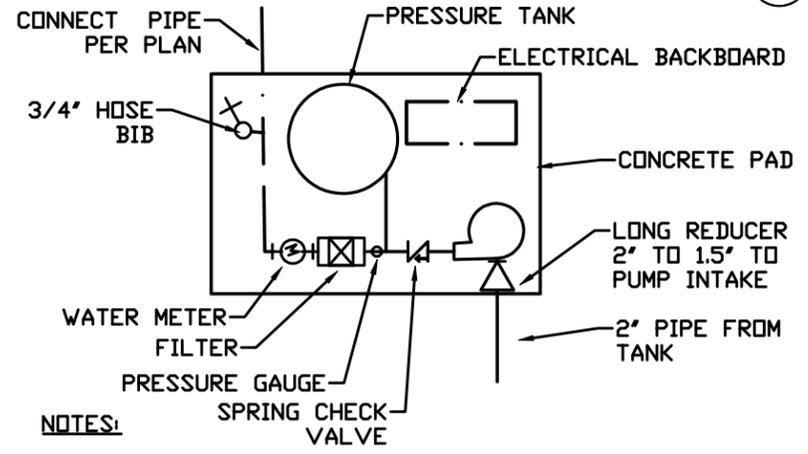


NOTE:
1. ROCK SHALL BE 4"-6" Ø WELL GRADED COBBLE, CALTRANS CLASS 1 OR EQUIVALENT.
2. ENSURE ROCK IS WELL GRADED AND FILL ALL VOIDS WITH SMALLER ROCKS DURING PLACEMENT.

ROCK RIPRAP OUTFALL ②
NTS

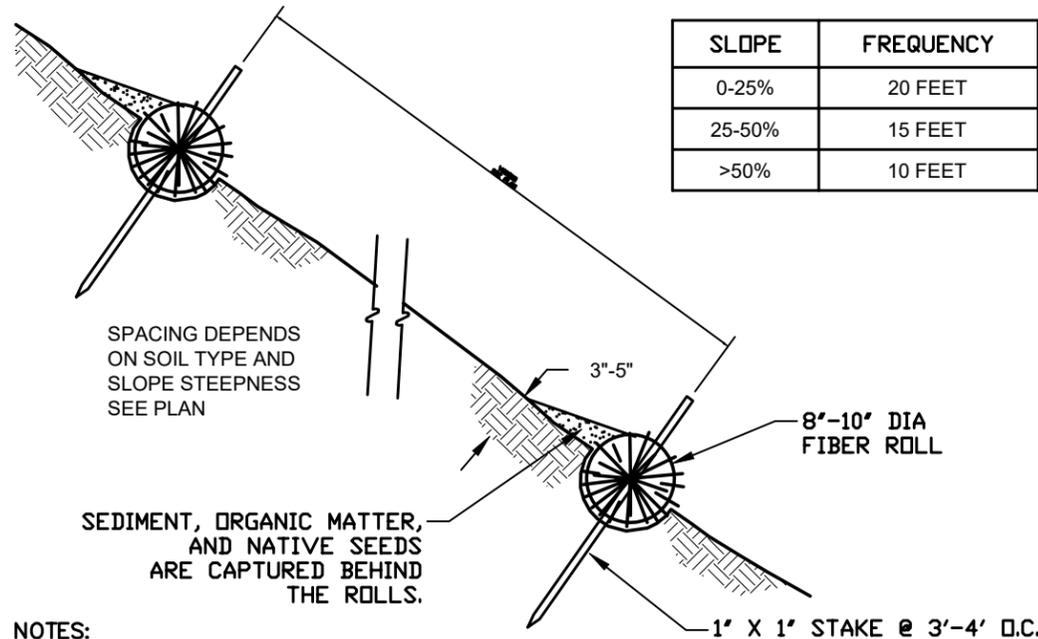


WARNING SIGNAGE SAMPLE DESIGN ③
NTS



NOTES:
1. SEE MATERIAL NOTES FOR MATERIAL SPEC.
2. USE 3/4" CONDUIT TO INSTALL LOW TANK FLOAT SWITCH TO PUMP CONTROLS.
3. INSTALL AIR VENT IF NEEDED ON LOCAL HIGH PLACES ON PIPE.
4. ALL PIPING SHALL BE SCH 40 GALV. STEEL.

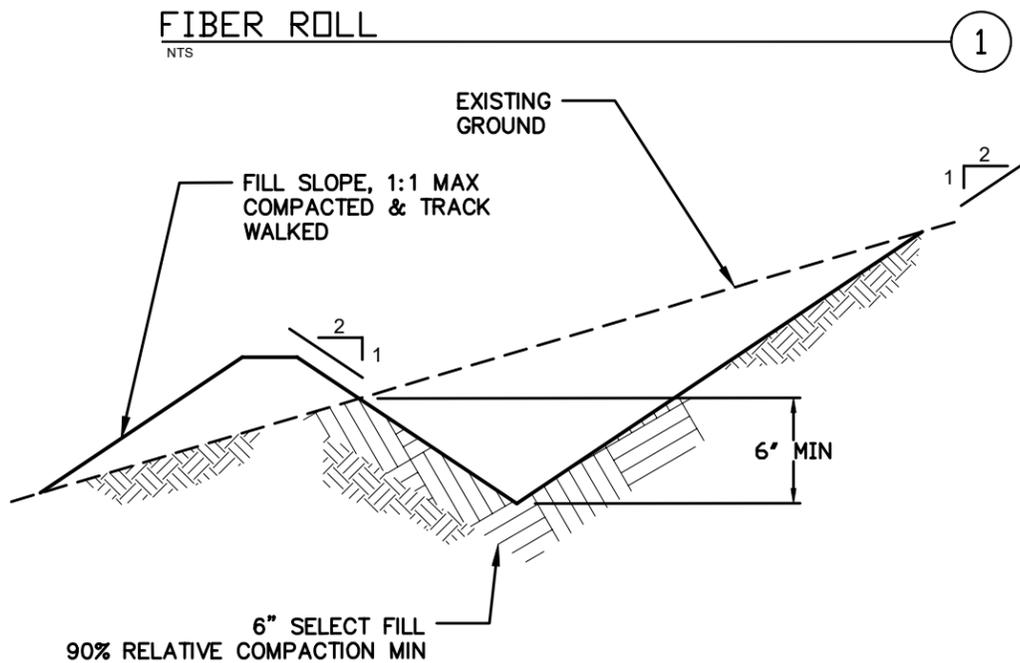
PUMP EQUIPMENT PLAN SCHEMATIC ⑤
NTS



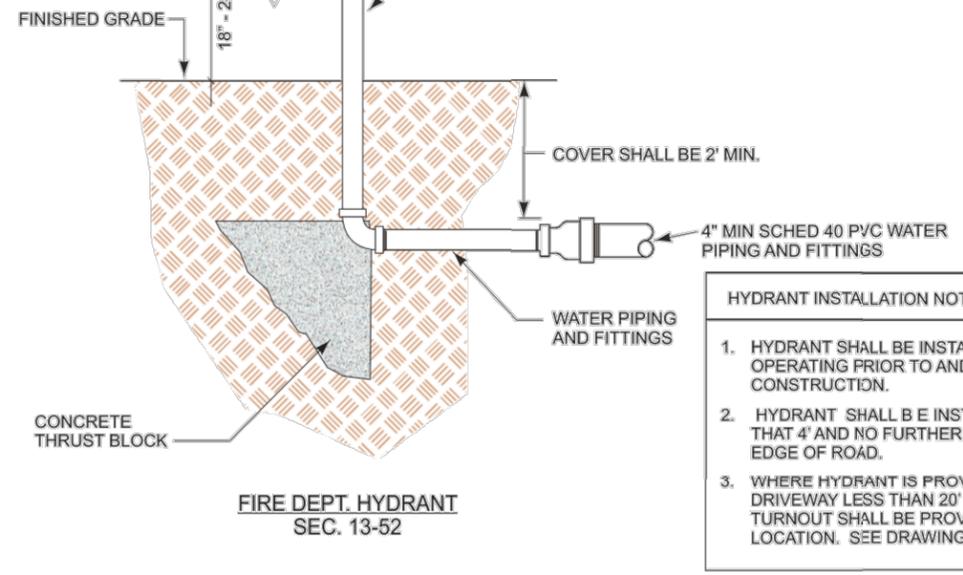
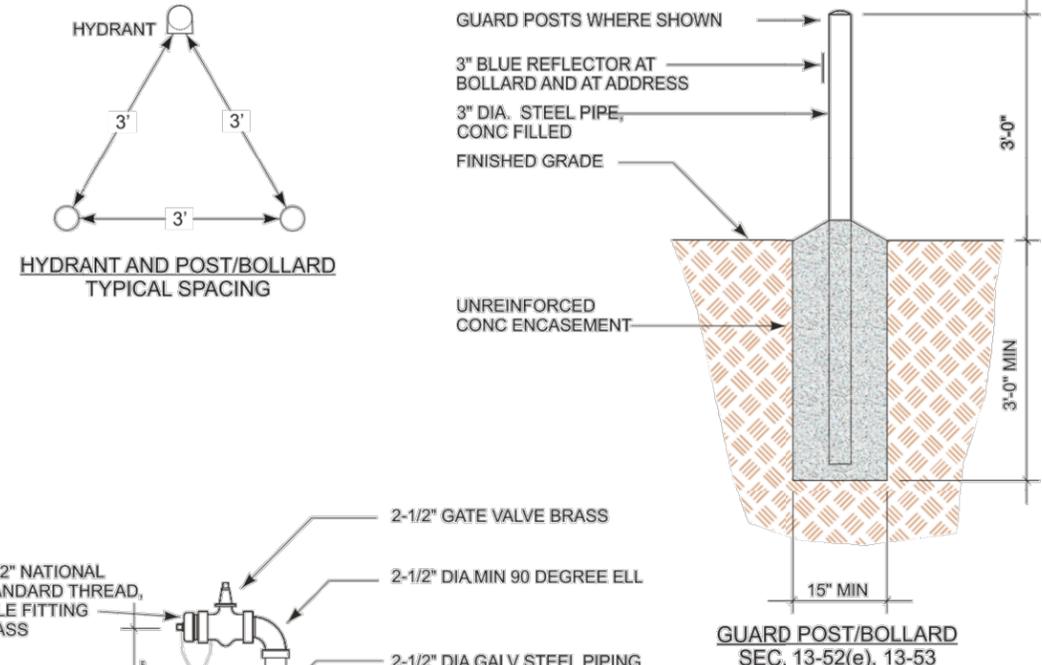
NOTES:

1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. ENDS OF ADJACENT ROLLS SHALL OVERLAP 1' MINIMUM.
3. FIBER ROLLS MUST BE PLACED ALONG SLOPE CONTOURS.
4. EXPOSED SLOPES SHALL HAVE FIBER ROLLS INSTALLED ALONG THE TOE OF SLOPE, AT GRADE BREAKS, AND IN ACCORDANCE WITH THE TABLE ABOVE.
5. FIBER ROLLS SHALL NOT BE PLACED ALONG THE TOP OF CUT SLOPES UPHILL OF THE GRADE BREAK.

FIBER ROLL
NTS



V-DITCH, TYPICAL SECTION
NTS



- HYDRANT INSTALLATION NOTES**
1. HYDRANT SHALL BE INSTALLED AND OPERATING PRIOR TO AND DURING CONSTRUCTION.
 2. HYDRANT SHALL BE INSTALLED NO CLOSER THAN 4' AND NO FURTHER THAN 12' FROM EDGE OF ROAD.
 3. WHERE HYDRANT IS PROVIDED AT ROAD OR DRIVEWAY LESS THAN 20' IN WIDTH, A TURNOUT SHALL BE PROVIDED AT HYDRANT LOCATION. SEE DRAWING 7.

SEC 13-52 FIRE DEPT HYDRANT/GUARD POSTS		FIRE SAFE STANDARDS	
SONOMA COUNTY FIRE AND EMERGENCY SERVICES DEPARTMENT 2300 COUNTY CENTER DR Santa Rosa, California 95403 Telephone (707) 565-1152 Fax (707) 565-1172		1/2" = 1'-0"	F3
		SCALE	
smosiurc Fire Safe Standards.cdr rev:12/10		01/19/17	DRAWING NO
		REVISION DATE	

FIRE HYDRANT
NTS

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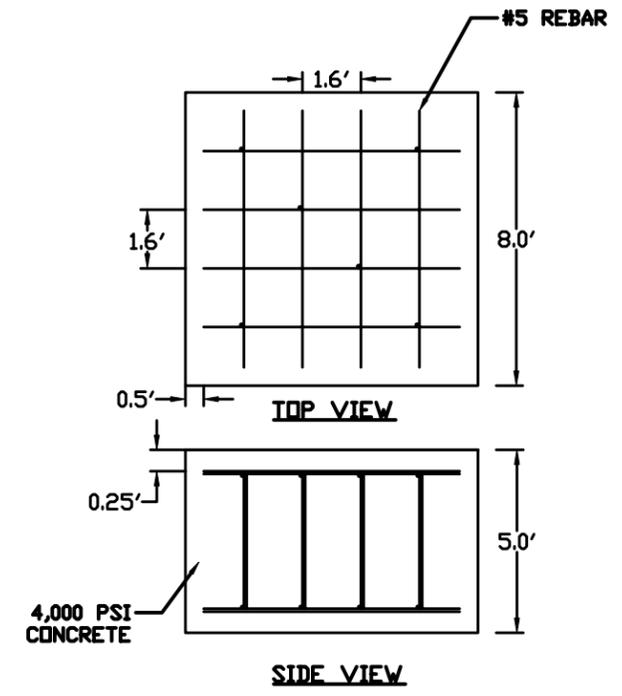
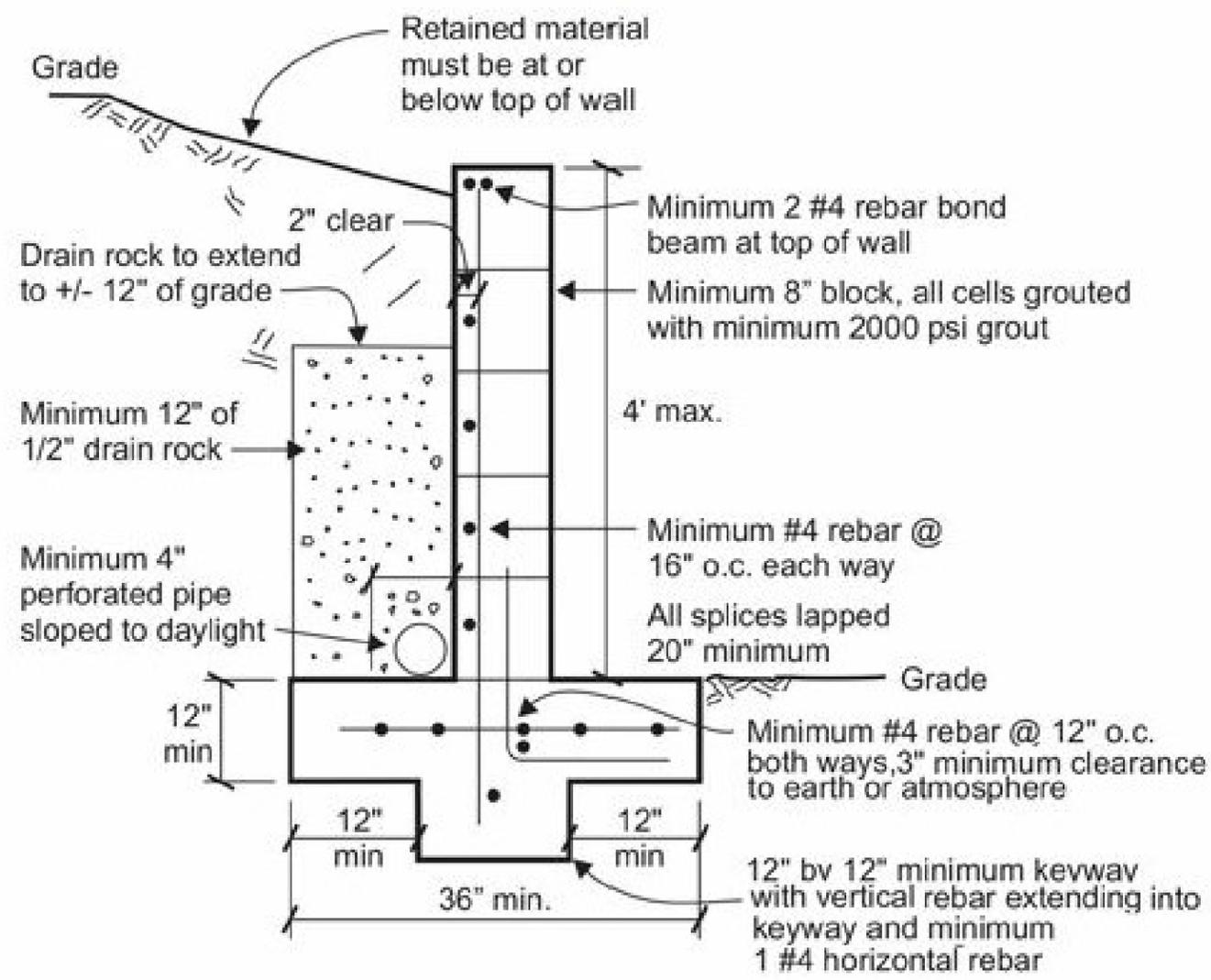
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DETAILS



Sheet No.

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Masonry Retaining Wall



NOTES:

1. FOOTING DETAIL FOR METAL CARPORT. USE THIS DETAIL UNLESS BUILDING MANUFACTURER SUPPLIES DETAIL.
2. COORDINATE FOOTING NUMBER, LAYOUT, AND LOCATION WITH BUILDING MANUFACTURER.
3. REBAR SHALL BE FREE OF RUST OR OIL OR OTHER SUBSTANCE THAT DOESN'T ALLOW FOR CONCRETE TO FULLY COAT.

RETAINING WALL 1

TYPICAL CONC. PIER FOUNDATION 2