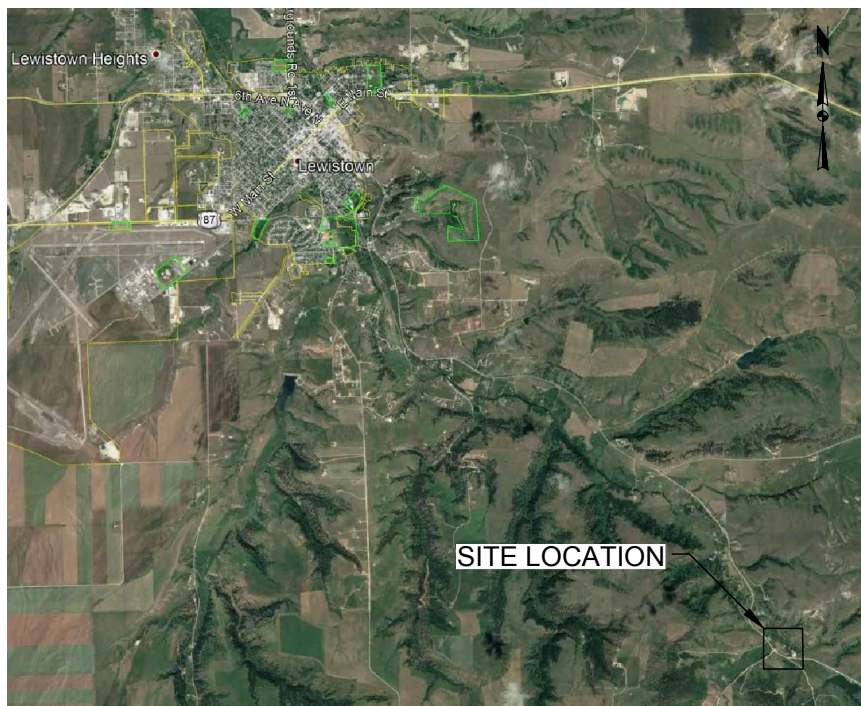


# CONSTRUCTION DRAWINGS FOR FWP LEWISTOWN - HATCHERY HOUSE

## 2051 FISH HATCHERY ROAD LEWISTOWN, MONTANA

AUGUST 10, 2020



### SHEET INDEX

SHEET NUMBER	DESCRIPTION
C1.0	COVER SHEET / LOCATION MAP AND DRAWING SCHEDULE
C1.1	NOTES, ABBREVIATIONS, AND LEGEND
C2.0	VICINITY MAP
C3.0	DRAINFIELD LAYOUT PLAN
C4.0	DETAILS
<b>TOTAL</b>	
<b>5 SHEETS</b>	



REV	DATE	REVISION



DRAWN BY: RCB  
 DESIGNED BY: RCB  
 QUALITY CHECK: RCB  
 DATE: 08-10-2020  
 JOB NO: 20-069  
 FIELDBOOK

**MT FWP HATCHERY HOUSE  
FERGUS COUNTY, MT**

**COVER SHEET**

20-069 - C1.X.DWG  
 SHEET **C1.0**

### GENERAL NOTES

- NOTIFY ALL UTILITY COMPANIES IN WRITING, CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE BEGINNING EXCAVATION.
- ALL CONSTRUCTION SHALL CONFORM TO MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWSS), LATEST EDITION.
- PERMITTING AND FEES SHALL BE PAID BY CONTRACTOR AND COORDINATED WITH COUNTY PLANNING DEPARTMENT.
- RESEARCH AND IF REQUIRED SECURE MPDES STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE MONTANA DEPT. OF ENVIRONMENTAL QUALITY PRIOR TO START OF CONSTRUCTION.
- PROVIDE AND MAINTAIN DUST CONTROL THROUGHOUT CONSTRUCTION.
- ELECTRONIC DESIGN FILES IN CIVIL 3D VERSION 2018 AVAILABLE FOR CONSTRUCTION STAKING UPON REQUEST AND EXECUTION OF TD&H "ELECTRONIC MEDIA WAIVER OF RESPONSIBILITY" FORM. ANY OTHER FORMAT OR SOFTWARE WILL REQUIRE PAYMENT FOR CONVERSION.
- ALL SOIL STOCKPILES MUST BE CONTAINED WITH SILT FENCE.
- ALL ELEVATIONS SHOWN REFERENCE FINISH GRADES.
- EXISTING UTILITIES SHOWN ARE BASED ON FIELD SURVEY DATA AND AVAILABLE AS-BUILT DRAWING INFORMATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING EXISTING UTILITIES AND CONFIRMING CONNECTION REQUIREMENTS PRIOR TO ORDERING NEW FITTINGS.
- ALL EXCAVATION SHALL BE TYPE 2 EXCAVATION PER OSHA AND ALL TRENCHES SHALL HAVE TYPE 'A' BACKFILL UNLESS OTHERWISE NOTED.
- PROTECT ALL EXISTING SURVEY MONUMENTATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY DISTURBED MONUMENTATION.
- ALL STREET SIGNAGE TO COMPLY WITH MUTCD CURRENT EDITION.
- COORDINATE ALL TRAFFIC CONTROL AND SITE ACCESS ISSUES AND PERMITTING WITH PROJECT ENGINEER OR DESIGNATED OWNER'S REPRESENTATIVE.
- REMOVE ANY OBSTACLE (FENCES, CONCRETE SLABS, SIGNS, PEDESTALS ETC.) THAT INTERFERE WITH CONSTRUCTION UPON APPROVAL OF PROJECT ENGINEER.

### SANITARY SEWER NOTES

- ALL WORK TO BE PERFORMED SHALL BE IN CONFORMANCE WITH THE COUNTY SEWAGE TREATMENT SYSTEM DESIGN AND CONSTRUCTION STANDARDS, COUNTY REGULATIONS FOR SEWAGE TREATMENT SYSTEMS AND IN ACCORDANCE WITH THE APPROVED PLANS.
- ALL SANITARY SEWER LINES SHALL BE IN ACCORDANCE WITH FERGUS COUNTY DESIGN CRITERIA, STANDARDS, AND ALL OTHER COUNTY REQUIREMENTS. PERMITTING SHALL BE SECURED BY CONTRACTOR.
- ALL PORTIONS OF THE SYSTEM WILL BE A MINIMUM OF 10 FEET FROM PROPERTY LINES, THE DRAINFIELD MUST BE A MINIMUM OF 50 FEET FROM ANY CISTERN AND 100' FROM SURFACE WATER OR WELL. THE SEPTIC TANK AND SEALED LINES MUST BE A MINIMUM OF 50 FEET FROM WELLS.
- THE SEPTIC & DOSING TANKS ARE TO BE LEAK TESTED PRIOR TO SERVICE. TESTING MAY BE VACUUM OR WATER PRESSURE METHODS.
- SEAL ALL JOINTS IN SEPTIC TANK/DOSING TANK WITH WATERTIGHT SEALS MEETING ASTM C990-09.
- GRADE SYSTEM SURFACE AND SURROUNDING GROUND TO PROVIDE POSITIVE DRAINAGE.
- MAINTAIN A MINIMUM OF 2% SLOPE TOWARDS SEPTIC TANK FROM THE BUILDING & 2% FROM SEPTIC TANK TO DRAINFIELD. ALL GRAVITY PIPES SHALL MAINTAIN A CONSISTENT GRADE.
- LATERALS SHALL BE FLUSHED PRIOR TO CAPPING ENDS.
- PVC GRAVITY SEWER PIPES ARE TO BE SDR35 PVC AND SHALL MEET THE REQUIREMENTS OF ASTM D 3034-08 & ASTM D 1785-12 STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
- EFFLUENT FILTER SHALL MEET ANSI/NSF STANDARD 46 FOR EFFLUENT FILTERS & INSTALLATION & MAINTENANCE INSTRUCTIONS.
- PRE-CAST CONCRETE SEPTIC TANK & DOSING TANK SHALL COMPLY WITH ASTM C 1227-12, ASTM C 150-12, TYPE I, TYPE I-II OR TYPE V CEMENT.
- SEPTIC & DOSING TANK MANUFACTURER SHALL PROVIDE PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN MONTANA & INSTALLATION INSTRUCTIONS.

### LEGEND

NEW	EXISTING	DESCRIPTION
		BUILDING CLEANOUT
		CONCRETE
		FENCE
		RIGHT OF WAY LINE
		ROAD CENTERLINE
		SEPTIC & DOSING TANK
		SANITARY SEWER
		SANITARY DRAINFIELD LATERALS

### ABBREVIATIONS

AND	&	MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS	MPWSS
AT	@	POLYVINYL CHLORIDE	PVC
CLEANOUT	CO	RADIUS	R
CONCRETE	CONC	REINFORCED CONCRETE PIPE	RCP
CONTROL POINT	CP	SCHEDULE	SCH
DIAMETER	DIA OR Ø	SQUARE FEET	SF
ELEVATION	EL OR ELEV	TOP OF CONCRETE	TOC
FINISH FLOOR	FF	TOP OF CURB	TC
FLOW LINE	FL	TOP SIDEWALK	TS
INVERT ELEVATION	IE	TYPICAL	TYP
LINEAR FEET	LF	VERIFY IN FIELD	VIF
MAXIMUM	MAX	WITH	W/
MINIMUM	MIN		

### SCALING NOTE

DRAWING SHEETS PRINTED FROM ADOBE PDF ELECTRONIC FILES ARE NOT TO SCALE. VERIFY PRINTED SHEET SCALES FROM THE BAR SCALES LOCATED ON THE PLAN SHEETS

### UTILITY LOCATION

THE LOCATIONS OF UNDERGROUND UTILITIES REPRESENTED ON THIS DRAWING HAVE BEEN DETERMINED FROM A FIELD SURVEY AND FROM RECORDS OBTAINED FROM THE VARIOUS UTILITY COMPANIES. THE NUMBER AND LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATION TO OBTAIN THE EXACT INFORMATION NECESSARY TO PROTECT OR ACCESS ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CALL THE FOLLOWING NUMBER FOR ASSISTANCE : 406-756-8344 OR 800-551-8344.

**"CALL BEFORE YOU DIG"**



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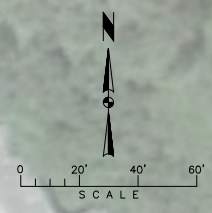
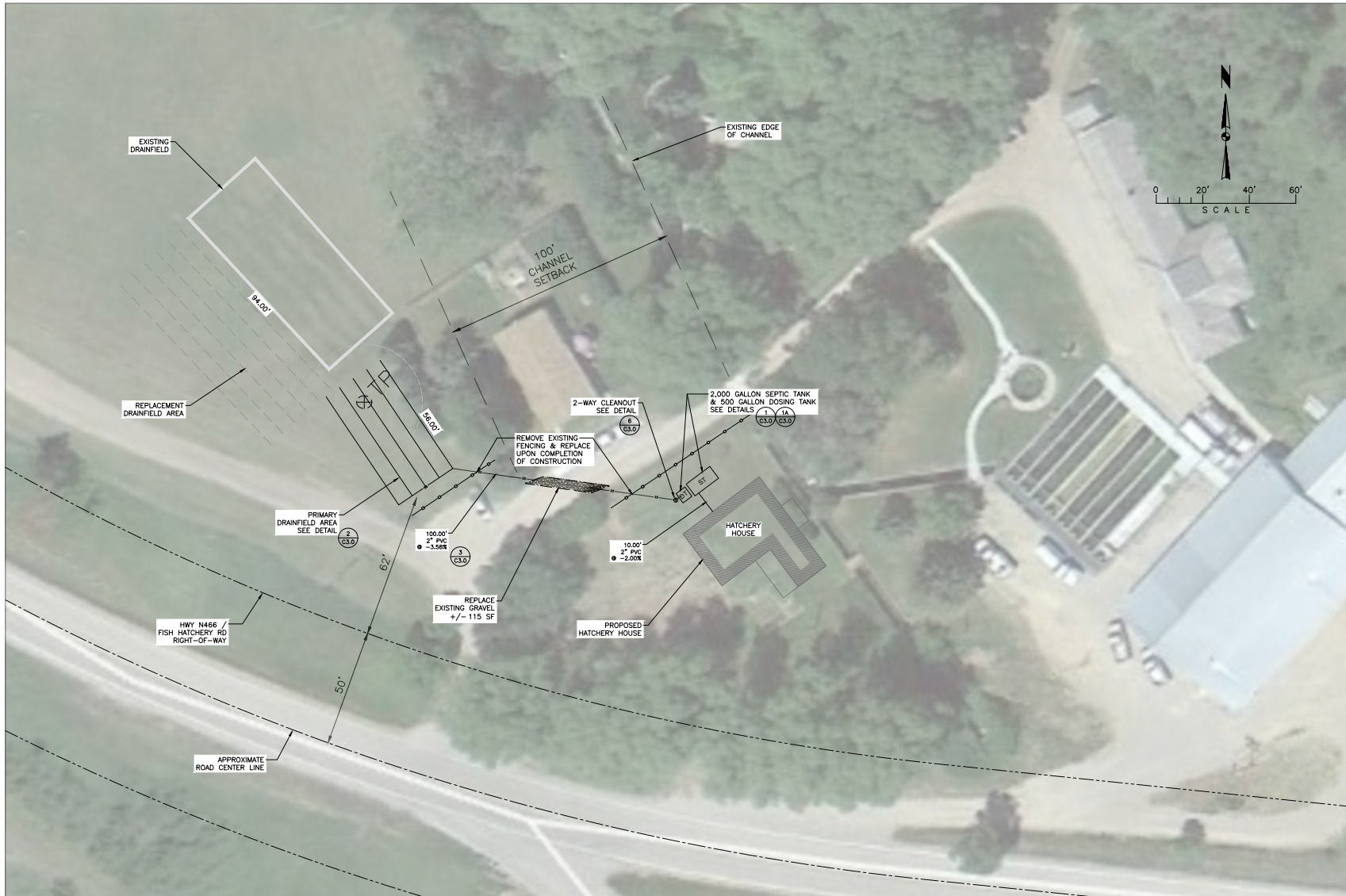
MT FWP HATCHERY HOUSE  
 FERGUS COUNTY, MT

COVER SHEET

20-069 - C1.X.DWG  
 SHEET C1.0







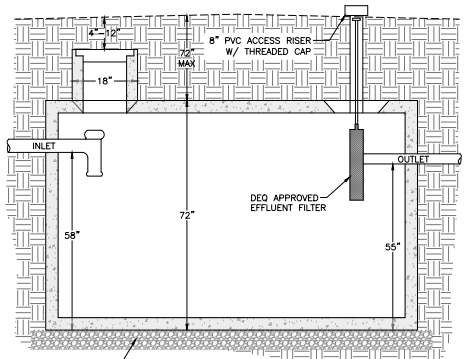
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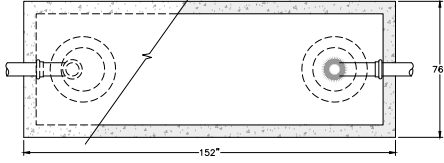
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 FIELD BOOK

**MT FWP HATCHERY HOUSE**  
**FERGUS COUNTY, MT**  
**DRAINFIELD LAYOUT PLAN**

J:\2020\060 MT FWP\_Fishery\_SitePlan\CADD\CADD\_C2.X\_SITELAYOUT.dwg 8/11/2024 4:10:33 PM RCB

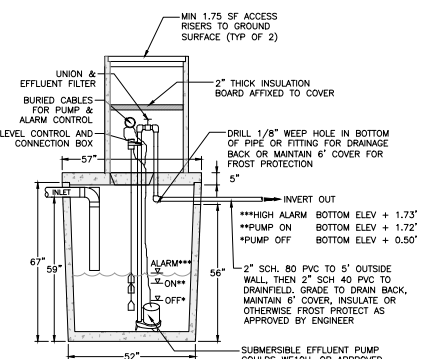


(8") - 3/4" MINUS WASHED GRAVEL LEVELING COURSE



TOP CROSS-SECTION OF SEPTIC TANK

**2,000 GALLON SEPTIC TANK** (1) NO SCALE C3.0

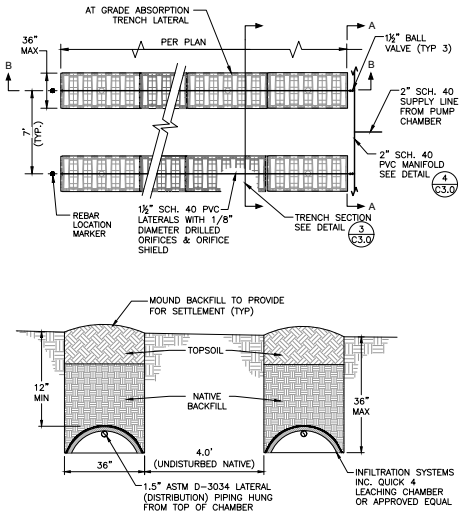


SUBMERSIBLE EFFLUENT PUMP GOULDS W/WEI, OR APPROVED EQUAL. (MAINTAIN PUMP SUBMERSION AS RECOMMENDED BY MANUFACTURER)

\*PROVIDE AND INSTALL CONTROL PANEL IN ACCORDANCE WITH PUMP MANUFACTURERS RECOMMENDATIONS

**500 GALLON DOSING TANK** (1A) NO SCALE C3.0

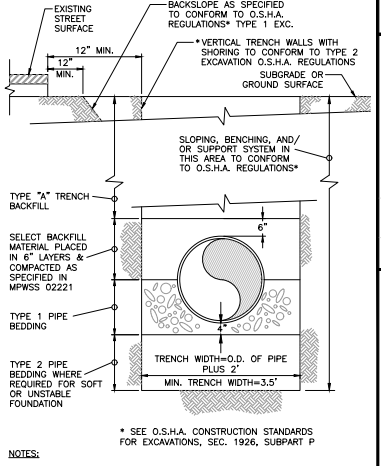
NOTES:  
1. PUMP SELECTION BASED ON 100' OF 2" DISCHARGE PIPE TO DRAINFIELD AND 10' OF ELEVATION CHANGE FROM SEPTIC TANK TO DRAINFIELD. FINAL PUMP SELECTION SHALL REFLECT SITE CONDITIONS AT INDIVIDUAL LOT.



**INFILTRATION CHAMBER INSTALLATION NOTES:**

- EXCAVATE LEVEL GRAVELLESS ABSORPTION TRENCHES FOR CHAMBER INSTALLATION.
- SCARIFY SURFACE TO REMOVE ANY SMEARING CAUSED DURING EXCAVATION.
- INSTALL LEACHING CHAMBERS IN ADJACENT ROWS TO COVER DESIRED AREA. LEACHING CHAMBERS TO BE INFILTRATION SYSTEMS INC. QUICK 4 LEACHING CHAMBER OR APPROVED EQUAL.
- INSTALL UNIVERSAL END CAP AND SECURE IN-PLACE WITH BACKLASH ANCHOR 1/2" DISTRIBUTION LATERAL TO THE TOP OF EACH ROW OF CHAMBERS.
- FILL PERIMETER AND INTERIOR SIDEWALL AREAS TO TOP OF CHAMBERS AND WALK INTO PLACE.

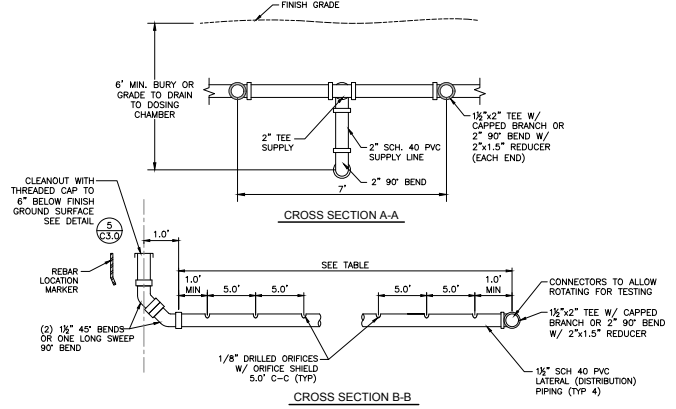
**STANDARD ABSORPTION TRENCH DETAIL** (2) NO SCALE C3.0



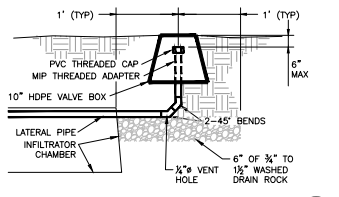
**TYPICAL UTILITY TRENCH DETAIL** (3) NO SCALE C3.0

1. WHERE TRENCH PASSES THROUGH EXISTING PAVEMENT, THE PAVEMENT SHALL BE CUT ALONG A NEAT VERTICAL LINE A MINIMUM OF 12" FROM THE EDGE OF THE TRENCH OPENING. WHERE NEAT LINE IS LESS THAN 3" FROM EDGE OF EXISTING PAVEMENT OR CURB AND GUTTER SECTION, REMOVE AND REPLACE ENTIRE PAVEMENT SECTION BETWEEN TRENCH AND EDGE OF PAVEMENT.

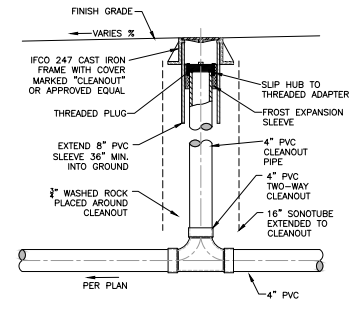
NOTES:  
\* SEE O.S.H.A. CONSTRUCTION STANDARDS FOR EXCAVATIONS, SEC. 1926, SUBPART P



**MANIFOLD-LATERAL DETAIL** (4) NO SCALE C3.0



**LATERAL CLEANOUT DETAIL** (5) NO SCALE C3.0



**2-WAY CLEANOUT DETAIL** (6) NO SCALE C3.0



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SEPTIC SYSTEM DETAILS  
20-069 - C3.0 - DETAILS.DWG  
SHEET C3.0