TOWN OF CASTLETON, VERMONT |

CONTRACT DRAWINGS FOR CRYSTAL HEIGHTS SEWERLINE EXTENSION CONTRACT No.1

FEBUARY, 2024

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INDEX OF DRAWINGS

PROJECT LOCATION

VERMONT

DRAWING No. DRAWING TITLE

TITLE SHEET AND INDEX OF DRAWINGS GENERAL NOTES AND LEGEND

PROPOSED PLAN AND PROFILE STA. 0+00 TO 8+00 PROPOSED PLAN AND PROFILE STA. 8+00 TO 16+26

SEWER DETAILS II

ROADWAY DETAILS EROSION CONTROL DETAILS AND NOTES

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TOWN OF CASTLETON, VERMONT

CRYSTAL HEIGHTS SEWERLINE EXTENSION CONTRACT No.1

TITLE SHEET AND INDEX OF DRAWINGS

PROJECT NO. DESIGNED DRAWN EDS JRL

FEB. 2024

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PLAN-EXISTING					PLAN-PROPOSED
WATERLINE		— — — — — — — — — — — — — — — — — — —			SANITARY SEWER
SANITARY SEWER		— -S- —			PERMANENT EASEMENT
CULVERT-DRAIN		— — D— ——			TEMPORARY EASEMENT
OVERHEAD POWER		—OHP— — —		—OHP———	MAJOR CONTOUR
UNDERGROUND ELECTRICAL CONDUIT		—UGE		—UGE——	MINOR CONTOUR
UNDERGROUND TELEPHONE CONDUIT		—UGT		—UGT——	SILT FENCE
PROPERTY LINE	— — — PL— — — -	——PL—— — — —	—PL—— —	— PL—	TREE-CLEARING LIMITS
RIGHT-OF-WAY			- ROW		SWALE
MAJOR CONTOUR		360			CAP
MINOR CONTOUR		 361 			MANHOLE
FENCE-MISCELLANEOUS	x x	- x x	x	_ x	TEST PIT
TREE-HEDGE LINE				· .	
SWALE				<u> </u>	PROFILE-PROPOSED
BITUMINOUS PAVEMENT					GROUND SURFACE
GRAVEL ROAD OR DRIVE		· — — — — · · — — — — -			PIPE
GARDEN			<u> </u>		INSULATION
STONE WALL			·		BEND-TEE
CAP	С				- WYE
REDUCER	. 4				
GATE VALVE	×				
CURB STOP	\otimes				
HYDRANT	7				
WELL					
MANHOLE					
CLEAN OUT	°C.0.				
CATCH BASIN	\blacksquare				
UTILITY POLE	ϕ				
LIGHT POLE	*				
GUY WIRE	(—				
DECIDUOUS TREE					
CONIFEROUS TREE					
BOLLARD	•				
SURVEY STATION	\bigcirc				
PROPERTY MARKER	©				
MISCELLANEOUS SIGN					
SOIL BORIING/PROBE	O _{D-4} D-5				
ELECTRICAL PEDESTAL	E E				
ELECTRICAL PULL BOX	E				
TELEPHONE PEDESTAL	Ф				
SHRUB	٥				
FLAG POLE	∞				
MAILBOX	MB				
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WETLAND BOUNDARY			, , , , , , , , , , , , , , , , , , ,	//./	
WETLAND BUFFER ZONE		////	, , , , , , , , , , , , , , , , , , ,	// .′	
PROFILE-EXISTING		· • • •	· — v	<u> </u>	
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GROUND SURFACE		-· -	· — •	<u> </u>	
PIPE		·	<i>,</i> , , , , , , , , , , , , , , , , , ,		
UTILITY CROSSING			·		
SOIL BORING/PROBE			- -		
NLTD = NO LEDGE TO DEPTH REF = REFUUSAL			· — •		
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PLAN-PHOPOSED	
SANITARY SEWER	
PERMANENT EASEMENT	
TEMPORARY EASEMENT	
MAJOR CONTOUR	360
MINOR CONTOUR	361
SILT FENCE	o
TREE-CLEARING LIMITS	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
SWALE	
CAP	С
MANHOLE	
TEST PIT	
PROFILE-PROPOSED	
GROUND SURFACE	
PIPE	
INSULATION	
BEND-TEE	ń

GENERAL CONSTRUCTION NOTES

1. <u>SAFETY</u>

- A. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL SAFETY LAWS AND BUILDING CODES TO PREVENT ACCIDENTS OR INJURY. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES ALL NECESSARY SAFEGUARDS AND BARRICADES FOR THE PROTECTION OF EMPLOYEES ON THE WORK AND SAFETY OF OTHERS EMPLOYED NEAR THE WORK AND THE PUBLIC. FURTHER. THE CONTRACTOR SHALL POST DANGER SIGNS AND OTHER WARNING DEVICES TO PROTECT INDIVIDUALS FROM BEING INJURED IN THE VICINITY OF
- B. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE V.O.S.H.A. SAFETY REQUIREMENTS. THE CONTRACTOR SHALL INSURE ALL WORK PROCEEDS IN ACCORDANCE WITH V.O.S.H.A. REQUIREMENTS FOR SAFETY TRENCHING, EXCAVATION, AND CONFINED SPACE ENTRY PROCEDURES.
- C. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT AND FACILITIES AS ARE NECESSARY AND REQUIRED TO PROVIDE EMERGENCY FIRST AID TO ANY PERSON WHO MAY BE INJURED IN THE PROSECUTION OF THE WORK UNDER THIS CONTRACT.
- D. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY TRAFFIC CONTROL SIGNS AND DEVICES BEFORE COMMENCING WORK ON THE PROJECT IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- E. THE CONTRACTOR SHALL MAINTAIN ALTERNATING ONE-WAY TRAFFIC ON ALL STREETS, ROADS, AND HIGHWAYS, AS WELL AS MAKE PROVISIONS TO ALLOW CONTINUOUS ACCESS TO ALL ADJACENT PROPERTIES.

2. EASEMENTS

- A. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN TEMPORARY CONSTRUCTION EASEMENT LIMITS AND/OR RIGHTS-OF-WAY AS SHOWN ON THE PLANS.
- B. WHERE NO TEMPORARY CONSTRUCTION EASEMENT IS SHOWN ON CONTRACT DRAWINGS, THE CONTRACTOR SHALL STAY WITHIN THE PERMANENT EASEMENT LIMITS, AND/OR RIGHTS-OF-WAY DURING CONSTRUCTION, AS SHOWN ON THE PLANS.

PROTECTION OF WORK

- A. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL BUILDINGS, STRUCTURES AND UTILITIES (BOTH PUBLIC AND PRIVATE), INCLUDING POWER POLES, SIGNS, UTILITY SERVICES, WATER MAINS (POTABLE AND PROCESS), HYDRANTS, SEWERS, FORCE MAINS, STORM DRAINS, BURIED ELECTRICAL OR CONTROL WIRES, GAS LINES, AND TELEPHONE CABLES WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS.
- B. THE CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ANY UTILITIES, STRUCTURES, PIPE LINES, AND CONDUITS WHICH MAY BE ENCOUNTERED DURING COMPLETION OF THE WORK. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT CONTRACTOR'S EXPENSE.

4. MAINTENANCE OF FLOWS

A. THE CONTRACTOR SHALL AT THE CONTRACTOR'S OWN COST, MAKE PROVISIONS FOR MAINTAINING FLOW THROUGH EXISTING FORCE MAINS. SEWER LINES, WATERLINES (POTABLE AND PROCESS), STORM DRAINS, AND WATER COURSES WHICH MUST BE INTERRUPTED DURING THE PROGRESS OF THE WORK. UPON COMPLETION OF THE WORK, ALL TEMPORARY FLOW DIVERSIONS, STRUCTURES, AND PIPING SHALL BE REMOVED FROM THE SITE.

5. **BURIED UTILITIES**

- A. UNDERGROUND UTILITIES LOCATIONS ARE APPROXIMATE ONLY. THOSE SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE ENGINEER, OWNER, REPRESENTATIVES OF THE TELEPHONE COMPANY, ELECTRICITY COMPANY, CABLE COMPANY, AND ANY OTHER UTILITY COMPANIES INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT TO COORDINATE THE MARKING, AND TIMING OF DISRUPTIONS OF THE VARIOUS UTILITIES, IF ANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN FIELD ALL LOCATIONS, DEPTHS, MATERIALS AND SIZE OF EXISTING UTILITIES POTENTIALLY IMPACTED BY THIS WORK.
- B. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. THESE SHALL BE EXCAVATED TO LOCATE BURIED UTILITIES AND TO DETERMINE SIZE, LOCATIONS AND/OR MATERIALS. SOME HAND EXCAVATING MAY BE NECESSARY TO PROTECT UTILITIES. TEST PITS SHALL BE EXCAVATED AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION SO THAT DESIGN REVISIONS MAY BE MADE IF REQUIRED. ALL TEST PITS REQUIRED OR NECESSARY BY THE CONTRACTOR SHALL BE INCLUDED IN THE VARIOUS LUMP SUM BID ITEMS.
- C. EXISTING UTILITIES SHALL BE PROTECTED OR REMOVAL AND REPLACEMENT SHALL BE COORDINATED WITH THE APPROPRIATE COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR REPAIR OF ANY SUCH DAMAGE AS QUICKLY AS POSSIBLE AT THE CONTRACTOR'S OWN EXPENSE. ALL UTILITIES WHICH MAY BE BROKEN OR DAMAGED SHALL BE REPAIRED TO AS GOOD OR BETTER CONDITION AND RECONNECTED FOR SERVICE. SUBMIT ALL REPAIR METHODS TO THE ENGINEER FOR APPROVAL. NO REPAIR SHALL BE BACKFILLED PRIOR TO INSPECTION BY THE ENGINEER IN THE FIELD. CONTRACTOR SHALL TAKE MEASUREMENTS TO DOCUMENT WHERE ALL SERVICE REPAIRS ARE MADE. RECORDS SHALL BE MADE AVAILABLE TO THE ENGINEER AND OWNER UPON REQUEST AND PRIOR TO THE END OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A SUPPLY OF REPAIR MATERIALS AND PIPE ON THE JOB SITE AT ALL TIMES IN ORDER TO MINIMIZE THE INCONVENIENCE CAUSED BY SUCH DAMAGE.
- D. THE CONTRACTOR SHALL PERMANENTLY PLUG ALL EXISTING LINES WHICH ARE REPLACED BY NEW ONES AT THE POINTS WHERE THEY ARE DISCONNECTED UNLESS THEY ARE TO REMAIN IN SERVICE.

<u>CONSTRUCTION</u>

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HOLDING UTILITY POLES AS NECESSARY. THE COST OF UTILITY POLE HOLDING SHALL BE INCIDENTAL TO THE PIPE. ALL WORK SHALL BE IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS.
- B. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG IN THE END OF ALL PIPE WORK AT THE COMPLETION OF EACH WORK DAY TO SEAL IT FROM WATER AND SOIL.

<u>CONSTRUCTION</u> (CONT.)

D. THE CONTRACTOR SHALL RESTORE DRIVEWAYS, LAWNS, AND SIDEWALKS IMMEDIATELY

AFTER WORK IS COMPLETE. PAVED DRIVEWAYS, ROADS, AND SIDEWALKS SHALL BE SHIMMED WITH GRAVEL UNTIL FINAL PAVING.

- E. EROSION CONTROL, AS NECESSARY, SHALL BE PROVIDED BY THE CONTRACTOR, IN ACCORDANCE WITH CONTRACT DOCUMENTS. EROSION CONTROLS SHALL BE IN PLACE DOWNSTREAM OF THE AREA OF CONSTRUCTION PRIOR THE START OF ANY EARTH DISTURBANCE. ALL DISTURBED AREAS ARE TO BE IMMEDIATELY STABILIZED.
- F. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREA WITHIN THREE (3) WORKING DAYS OF INITIAL DISTURBANCE. ALL RESTORATION SHALL BE AS GOOD OR BETTER THAN ORIGINAL CONDITION AND SHALL MEET THE REQUIREMENTS SET FORTH IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN.
- G. CONTRACTOR SHALL PROVIDE RIGID INSULATION AS REQUIRED WHERE EVER MINIMUM COVER OF NEW SEWER LINES CANNOT BE MET.
- H. FOR MANHOLES TO BE ABANDONED, REMOVE THE FRAME AND COVER AND TOP PORTION 2' BELOW GRADE, AND FILL IN WITH FLOWABLE FILL.
- I. THE CONTRACTOR SHALL USE ONLY DESIGNATED BENCH MARKS FOR REFERENCE ELEMENTS. THE SILL ELEVATIONS SHOWN ON THESE PLANS ARE FOR DESIGN PURPOSES
- J. SUBSURFACE EXPLORATION LOGS ARE BOUND IN THE SPECIFICATIONS.
- K. THE NEW GRAVITY SEWER SYSTEM, SHALL BE TESTED, INSPECTED AND APPROVED PRIOR TO TRANSFERRING SERVICE TO THE SYSTEM. NO WASTEWATER SHALL BE ALLOWED IN THE NEW SYSTEM UNTIL APPROVED BY THE OWNER AND ENGINEER.

7. <u>SITEWORK</u>

- A. THE CONTRACTOR IS RESPONSIBLE FOR RECORDING PRECONSTRUCTION CONDITIONS BY USE OF PHOTOGRAPHS, VIDEO TAPES, AND OTHER METHODS. EXISTING FENCES, GUARDRAILS, SIGNS, CATCH BASINS, CULVERTS, HEADWALLS, ETC. REMOVED BY THE CONTRACTOR SHALL BE REPLACED TO AT LEAST THEIR ORIGINAL CONDITION. THE COST OF THIS PRECONSTRUCTION DOCUMENTATION AND RECONSTRUCTION SHALL BE PAID FOR UNDER THE UNIT PRICE BID ITEM FOR PIPE WORK.
- B. ALL EXCESS MATERIAL SHALL BE DISPOSED OF AT SITES SELECTED BY THE CONTRACTOR AND APPROVED BY THE OWNER. A COPY OF A WRITTEN AGREEMENT BETWEEN THE CONTRACTOR AND THE SITE OWNER SHALL BE SUBMITTED TO THE ENGINEER BEFORE ANY MATERIAL IS DEPOSITED AT THE SITE. DISPOSAL OF EXCESS MATERIALS OFF-SITE SHALL BE PERFORMED IN ACCORDANCE WITH STATE REGULATIONS AND SHALL INCLUDE THE OBTAINING OF ANY REQUIRED PERMITS.
- C. CONTRACTOR IS RESPONSIBLE FOR RESTORING LAWNS, GRAVEL SHOULDERS. PAVED SHOULDERS, ROADWAY SURFACES, DRIVEWAYS, AND CULVERTS TO THE SAME OR BETTER CONDITION AT PROJECT COMPLETION.
- D. SOME MAILBOXES AND SIGNS ARE NOT SHOWN ALONG PROJECT ROUTE FOR REASONS OF CLARITY. THE CONTRACTOR SHALL RESET ALL MAILBOXES AND SIGNS AS SOON AS POSSIBLE, AS CONSTRUCTION PERMITS AND/OR AS DIRECTED BY THE ENGINEER.
- E. TREES LOCATED WITHIN THE TEMPORARY CONSTRUCTION EASEMENT LIMITS SHALL NOT BE TRIMMED. DAMAGED. OR DESTROYED WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER ON A LOCATION BY LOCATION BASIS. DOCUMENTATION MUST BE FURNISHED TO THE ENGINEER PRIOR TO PERFORMING THE WORK.

8. <u>RECORD DOCUMENTS</u>

- A. ALL NEW UTILITIES SHALL BE DOCUMENTED WITH THREE (3) DISTANCE TIES, DEPTH OF BURY, MATERIAL(S), SIZE, AND DIMENSIONS, AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT AND SHALL BE PROVIDED TO THE ENGINEER IMMEDIATELY UPON REQUEST
- B. ALL NEW SEWER LINES AND APPURTENACES SHALL BE DOCUMENTED WITH THREE (3) DISTANCE TIES AND DEPTH OF BURY, AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT AND SHALL BE PROVIDED TO THE ENGINEER IMMEDIATELY UPON REQUEST.
- RECORD DRAWINGS SHOWING ALL OF THE ABOVE INFORMATION SHALL BE SUBMITTED TO THE ENGINEER WITHIN 30 DAYS OF THE SUBSTANTIAL COMPLETION. A CERTIFICATE OF FINAL COMPLETION AND FINAL PAYMENT WILL NOT BE ISSUED UNTIL RECORD DOCUMENTATION HAS BEEN APPROVED BY THE ENGINEER.

9. <u>DIGSAFE</u>

- A. CONTRACTOR SHALL NOTIFY DIG SAFE TWO (2) WEEKS PRIOR TO ANY ANTICIPATED EXCAVATIONS. CONTRACTOR SHALL NOT EXCAVATE IN ANY AREAS UNTIL DIG SAFE HAS BEEN TO THE SITE AND HAS MARKED UTILITIES (DIG SAFE:1-888-344-7233). TOWN MUNICIPALITIES SHALL BE CONTACTED TO LOCATE THEIR RESPECTIVE UTILITIES: WASTEWATER CONTRACT OPERATOR, SIMON OPERATOR SERVICES 802-459-2501, PUBLIC WORKS FOREMAN, JOHN CORLESS, 802-342-1900.
- B. TOWN OF CASTLETON ADMINISTRATIVE STAFF (802-468-2459) AND SEWER DEPARTMENT STAFF (802-468-5315) SHALL BE NOTIFIED TWO (2) WEEKS PRIOR TO ANY ANTICIPATED EXCAVATION.

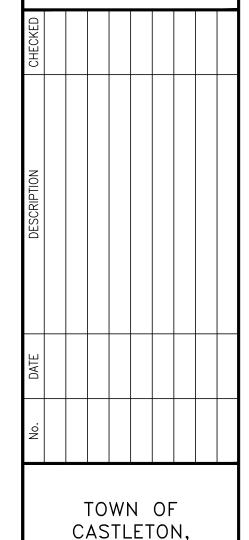
10. SURVEY

- A. TOPOGRAPHIC SURVEY IS NOT BASED ON AN ESTABLISHED DATUM.
- B. PROPERTY AND RIGHT OF WAY (ROW) LINES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI). THEY SHOW AN APPROXIMATION OF PROPERTY AND ROW LINES AS THEY RELATE TO THE PROJECT DETAILS BASED ON THE SOURCE REFERENCE INFORMATION. A+E DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION. THESE DRAWINGS SHALL NOT BE CONSTRUED AS A PROPERTY PLAT AND DO NOT DEFINE LEGAL RIGHTS OR MEET LEGAL REQUIREMENTS FOR A LAND SURVEY AS DESCRIBED IN 26 V.S.A. 2502(4).



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CRYSTAL HEIGHTS SEWERLINE

EXTENSION

CONTRACT No.1

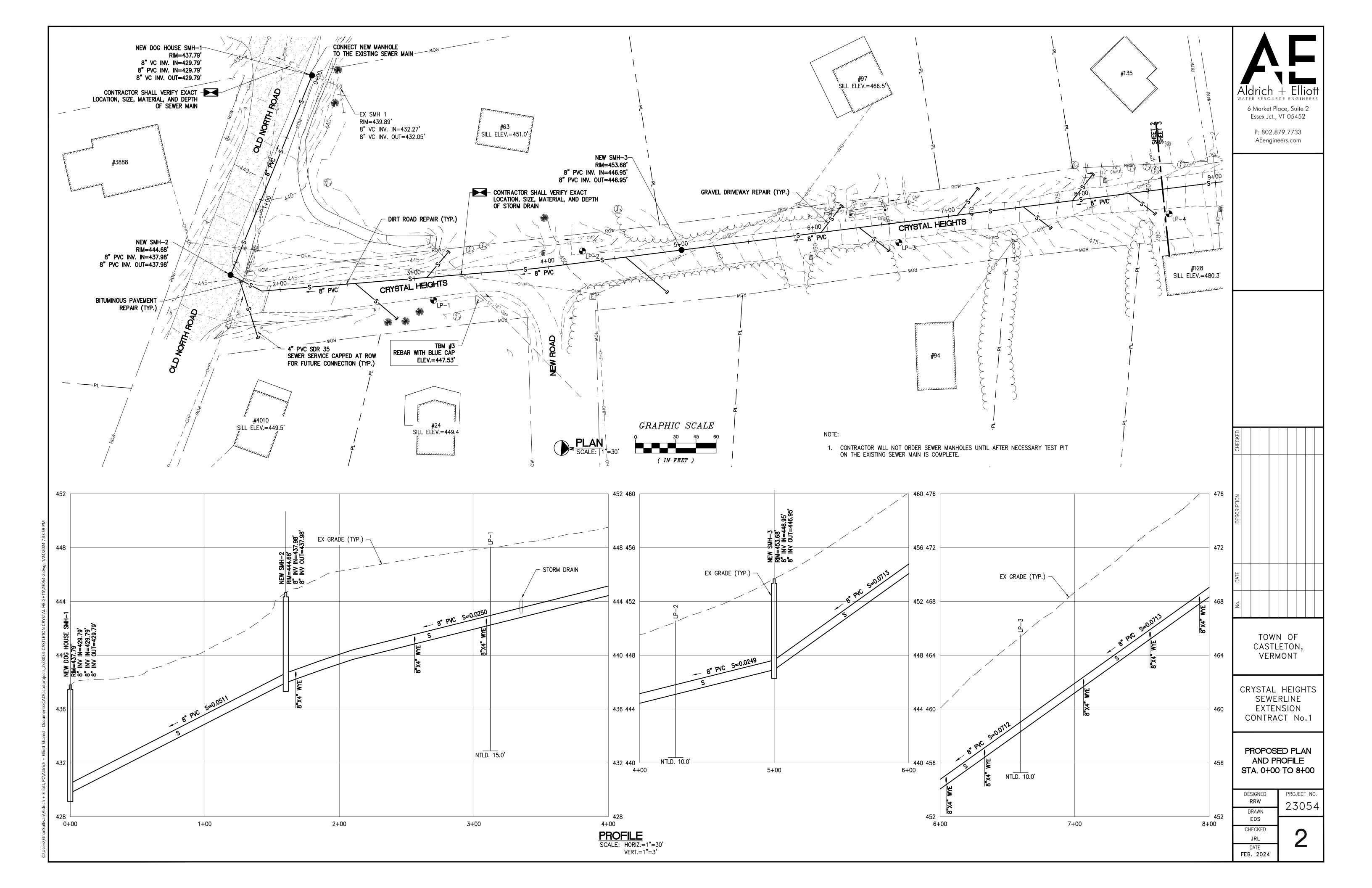
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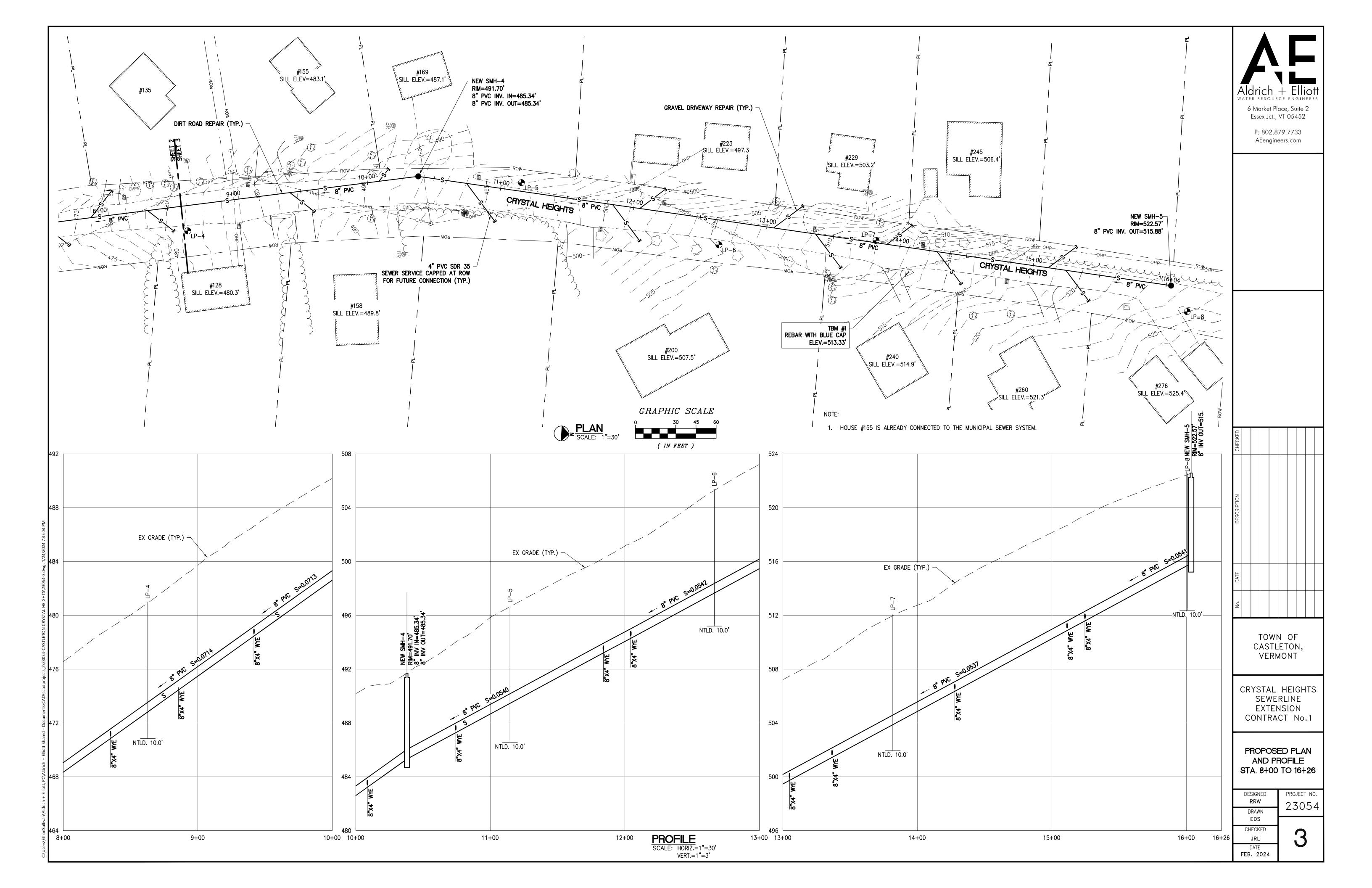
GENERAL CONSTRUCTION

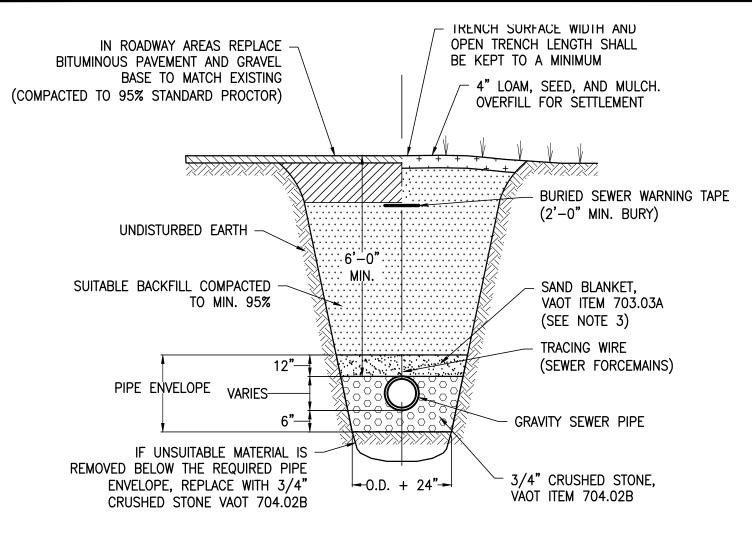
NOTES AND LEGEND

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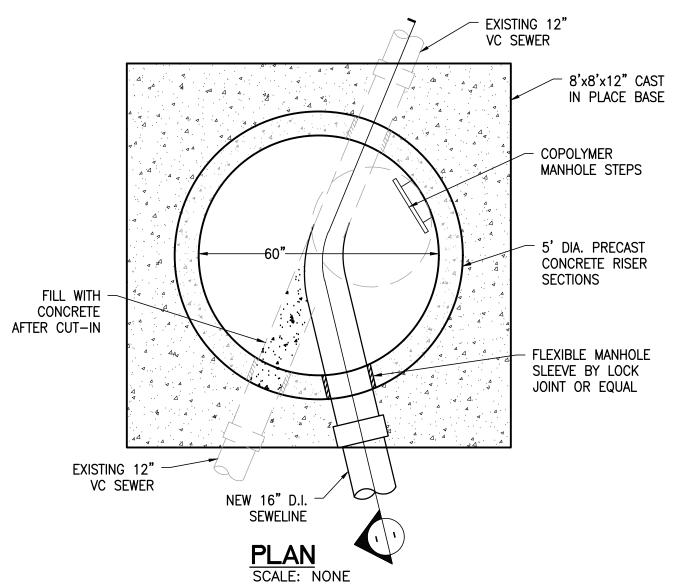


NOTES:

1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PVC PIPE TO ENSURE PIPE IS NOT DAMAGED.

- 2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.
- 3. FOR INITIAL BACKFILL CONTRACTOR CAN USE 3/4" CRUSHED STONE OR SAND BORROW.

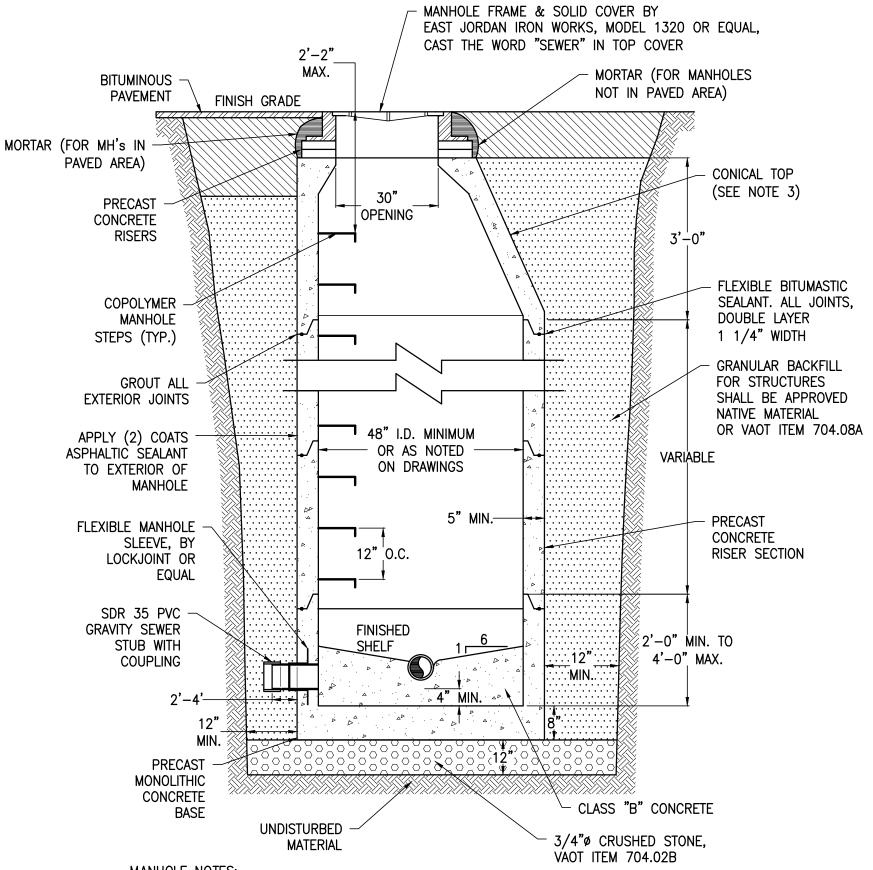




NOTES

- 1. NEW SEWER MANHOLES OVER EXISTING SEWERLINES SHALL BE "DOG HOUSE" TYPE MANHOLES WITH CAST—IN—PLACE BASES. DO NOT SET ANY RISER SECTIONS UNTIL CAST—IN—PLACE BASE AND BOTTOM RISER HAS SET FOR MIN. 24 HOURS.
- 2. THE BOTTOM RISER SHALL BE A 5'øx4' HIGH RISER WITH (2) 18" KNOCK OUTS AT BOTTOM OF RISER FOR THE EXISTING 12" VC PIPE.
- 3. THE AREA AROUND THE 12" PIPES SHALL BE SEALED WATER TIGHT. APPLY (2) COATS OF ASPHALTIC SEALANT TO CAST—IN—PLACE BASE AND SEALED AREAS AROUND 12" PIPES.
- 4. INVERTS OF MANHOLE SHALL BE LINED WITH HARD SEWER BRICK.
- 5. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING

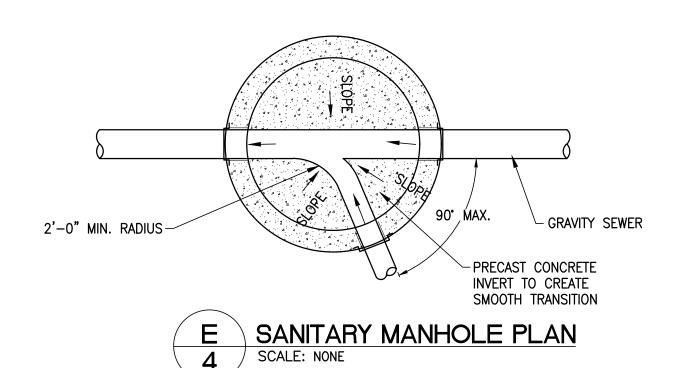
D TYPICAL DOG HOUSE MANHOLE DETAIL
4 SCALE: NONE

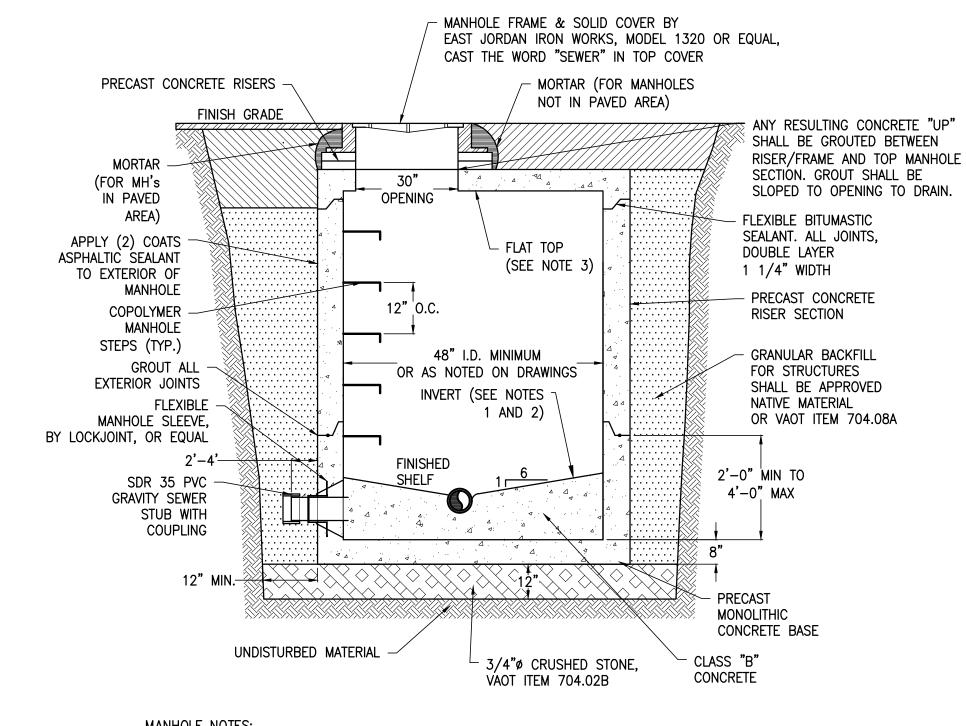


1. INVERTS OF MANHOLE SHALL BE LINED WITH PRECAST CONCRETE.

- 2. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INLET AND OUTLET PIPES. NO GAP IS ALLOWED BETWEEN THE SHELF/TROUGH AND INNER WALL OF MANHOLE AROUND THE PIPE.
- 3. IF DEPTH OF MANHOLE IS 7 FEET OR LESS FROM RIM TO CENTERLINE INVERT THEN A FLAT TOP SHALL BE INSTALLED IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 7 FEET THEN A CONICAL TOP SHALL BE INSTALLED.



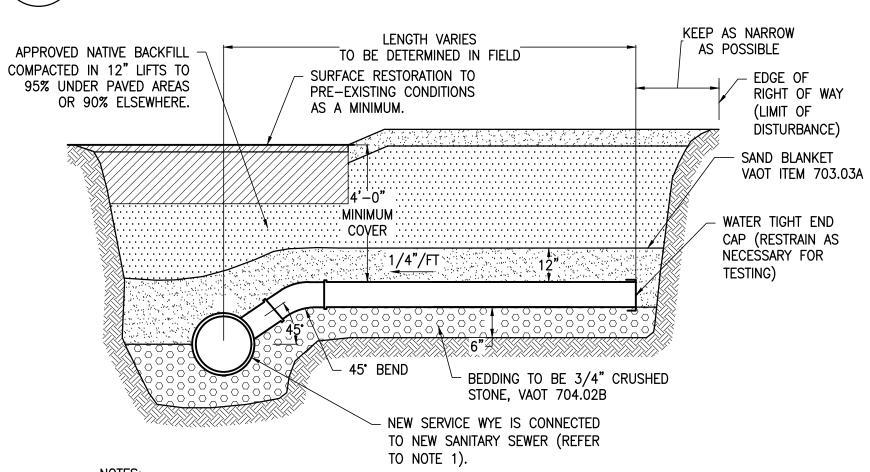




<u>MANHOLE NOTES:</u>
1. INVERTS OF MANHOLE SHALL BE LINED WITH PRECAST CONCRETE.

- 2. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INLET AND OUTLET PIPES. NO GAP IS ALLOWED BETWEEN THE SHELF/TROUGH AD INNER WALL OF MANHOLE AROUND THE PIPE.
- 3. IF DEPTH OF MANHOLE IS 7 FEET OR LESS FROM RIM TO CENTERLINE INVERT THEN A FLAT TOP SHALL BE INSTALLED IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 7 FEET THEN A CONICAL TOP SHALL BE INSTALLED.





1. ALIGN WYE SO AS THE SERVICE END IS DIRECTED UPSTREAM TO THE SEWAGE FLOW.

- 2. THREE (3) TIES SHALL BE TAKEN OF THE CAPPED END OF ALL LATERALS.
- 3. EACH NEW SERVICE LATERAL TO BE PRESSURE TESTED ALONG WITH SEWER.
- 4. EXTEND EACH SERVICE LATERAL TO THE LIMITS SHOWN ON THE DRAWINGS AND RECONNECT TO EXISTING SERVICE LATERALS AFTER TESTING.
- 5. MAINTAIN A CONSTANT SLOPE FROM WYE TO END CAP. MINIMUM SLOPE SHALL BE 1/4"/FT FOR 4" SERVICES AND 0.006 FT/FT FOR 6" SERVICES.
- 6. PROVIDE INSULATION AS FOLLOWS:
- a. FOR PLOWED AREAS WHERE 5' OF COVER CANNOT BE MAINTAINED.b. FOR UNPLOWED AREAS WHERE 4' OF COVER CANNOT BE MAINTAINED.

F TYPICAL SANITARY SEWER SERVICE DETAIL
4 SCALE: NONE

Aldrich + Elliot
WATER RESOURCE ENGINEER

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No. DATE DESCRIPTION CHECKED

TOWN OF CASTLETON, VERMONT

CRYSTAL HEIGHTS
SEWERLINE
EXTENSION
CONTRACT No.1

SEWER DETAILS I

DESIGNED PROJECT NO.

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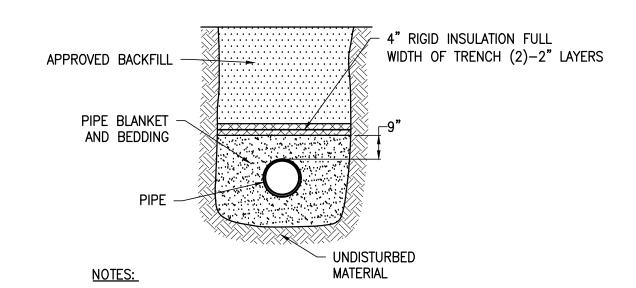
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DATE **FEB. 2024**

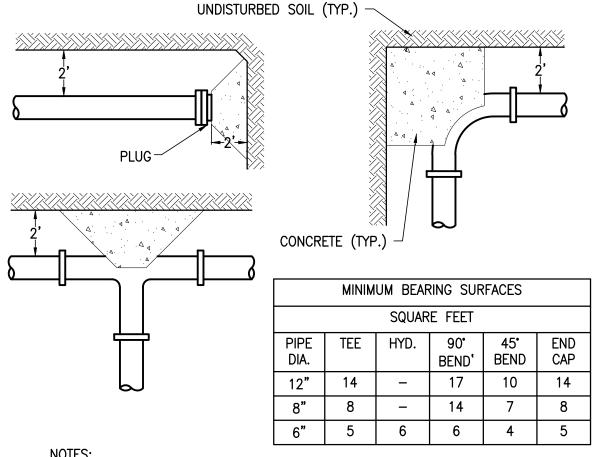
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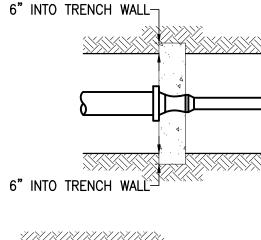
- 1. STAGGER INSULATION JOINTS SO THAT NO JOINTS OF THE TWO (2) LAYERS ARE ONE OVER THE OTHER.
- 2. TO BE INSULATED AS DIRECTED BY THE ENGINEER.
- 3. INSULATION TO BE UTILIZED AT ALL LOCATIONS INDICATED ON PLAN SHEETS AND OTHER AREAS WHERE 6'-0" MINIMUM COVER CANNOT BE MAINTAINED.

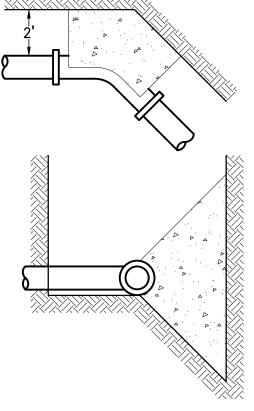
TYPICAL PIPE INSULATION DETAIL SCALE: NONE



- 1. THRUST BLOCKS SHALL BE PROVIDED AT ALL PRESSURIZE PIPELINE TEES, 90° AND 45° BENDS, REDUCERS, END CAPS, AND HYDRANTS.
- 2. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE. SEE SPEC SECTION 03305
- 3. CONCRETE SHALL BE PLACED SO AS NOT TO HAMPER THE FUTURE REMOVAL OF A FITTING.
- 4. ALL FITTINGS ARE TO BE WRAPPED WITH POLYETHYLENE.
- 5. MINIMUM BEARING SURFACE IS BASED ON A SOIL TYPE WITH AASHTO CLASSIFICATION OF GROUP A-3 AND A-4 FOR GRANULAR AND SANDY/SILTY MATERIALS. OTHER SOIL TYPES MAY REQUIRE AN INCREASE IN THE BEARING SURFACE, AS IDENTIFIED DURING CONSTRUCTION.





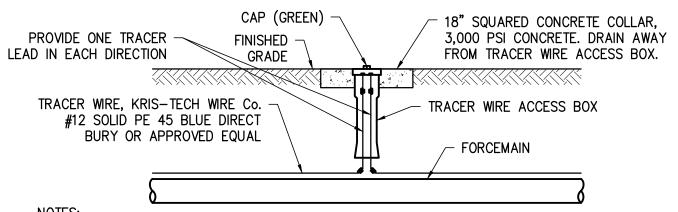


TYPICAL SECTION
SCALE: NONE



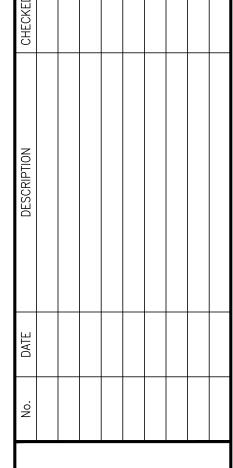
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- 1. TRACER WIRE SHALL BE TERMINATED AT EACH END IN A FLUSH MOUNT ACCESS BOX. ACCESS BOX SHALL HAVE A CAST IRON LID THAT CAN BE LOCKED AND OPENED WITH A STANDARD PENTAGON HEAD KEY WRENCH. TRACER WIRES SHALL BE STRIPPED AND ATTACHED TO STAINLESS STEEL SCREWS MOUNTED TO THE UNDERSIDE OF THE LID. SUFFICIENT SLACK (12" MIN.) SHALL BE LEFT IN WIRE LENGTH SO COVER CAN BE LIFTED WITH WIRE INTACT. TRACER WIRE ACCESS BOX SHALL BE LOCATED OVER PIPE LINE TO WHICH TRACER LEAD IS ATTACHED AND SET TO GRADE. TRACER WIRE ACCESS BOX SHALL BE VALVCO TWAB OR APPROVED EQUAL.
- 2. TRACER WIRE ACCESS POINTS SHALL IN GENERAL BE NO MORE THAN 500 FEET APART.



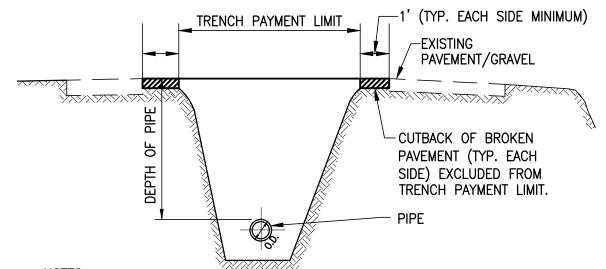


TOWN OF CASTLETON, VERMONT

CRYSTAL HEIGHTS SEWERLINE EXTENSION CONTRACT No.1

SEWER DETAILS II

DESIGNED	PROJECT
RRW	2305
DRAWN	1 2300
EDS	
CHECKED	
IDI	

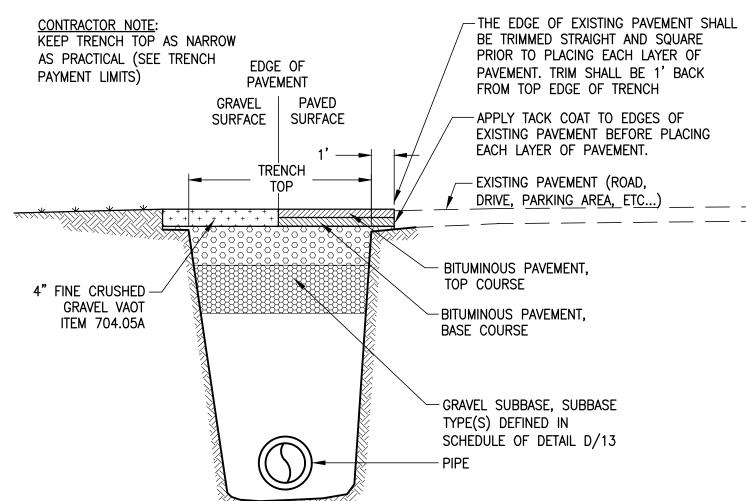


1. THE TRENCH PAYMENT LIMIT SHALL BE AS FOLLOWS: DEPTH OF PIPE TRENCH LIMIT 0 TO 10 FEET | 0.D.+5'

GREATER THAN 10 FEET | 0.D.+7'

- 2. THE TRENCH PAYMENT LIMIT APPLIES TO ALL TRENCHES AND ALL SURFACES. SURFACE REPLACEMENT AND RESTORATION OUTSIDE OF THE TRENCH PAYMENT LIMITS WILL BE AT THE CONTRACTOR'S EXPENSE.
- 3. WHERE CONCRETE ROADWAY IS REMOVED PERPENDICULAR TO THE ROADWAY (OR FLOW OF TRAFFIC), THE EDGES OF THE SECTION, TO BE REMOVED WITHIN THE TRENCH PAYMENT LIMITS, SHALL BE SAWCUT STRAIGHT PRIOR TO REMOVAL OF THE CONCRETE.
- 4. WHERE THE CONTRACTOR ENCOUNTERS CONCRETE ROADWAY DURING TRENCH EXCAVATION, THE BITUMINOUS PAVEMENT SHALL BE CUT BACK AT A MINIMUM OF 6" OVER THE CONCRETE ROADWAY.



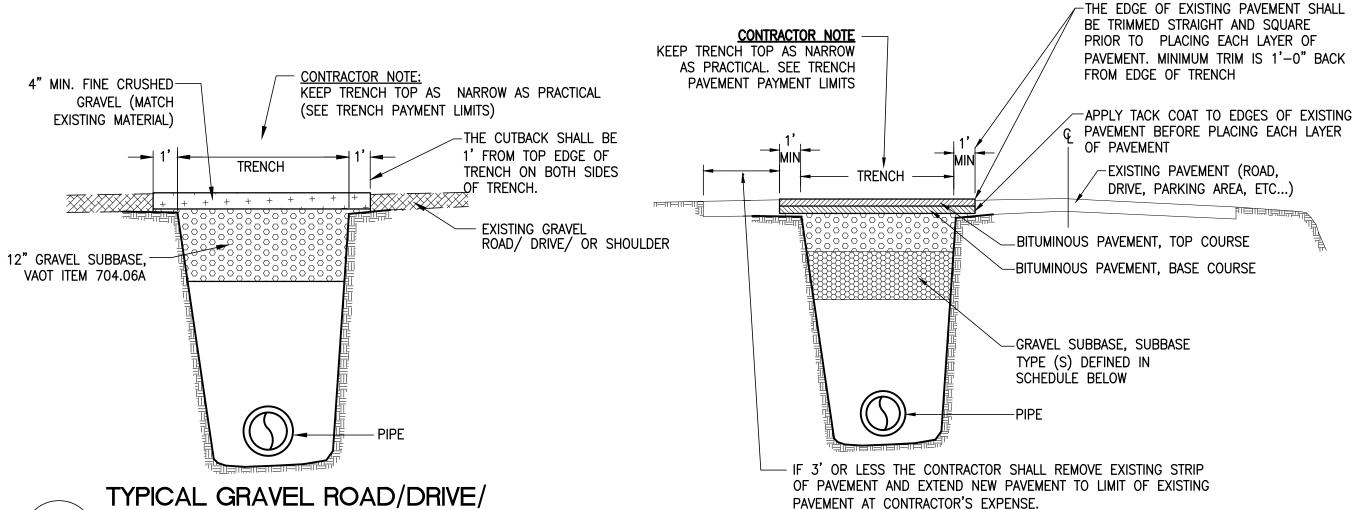


NOTES:

- 1. IT IS INTENDED THAT THE CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT CONTRACTOR'S EXPENSE.
- 2. ALL PAVEMENT AND GRAVEL SUBBASE SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN IN "SCHEDULE OF TRENCH REPAIR THICKNESSES" SEE DETAIL D/13.
- 3. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- 4. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY.
- 5. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.



EDGE OF PAVEMENT TRENCH REPAIR DETAIL SCALE: NONE



OR SHOULDER REPAIR DETAIL PAVEMENT REPAIR NOTES:

SCALE: NONE

- 1. ALL PAVEMENT SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN.
- 2. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.
- 3. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY.
- 4. IT IS INTENDED THAT CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN 3'-0" OF PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT CONTRACTOR'S EXPENSE.

SCHEDULE OF TRENCH REPAIR THICKNESSES

	STREETS	DRIVEWAYS
BITUMINOUS PAVEMENT		
TOP COURSE - TYPE III	1-1/2"	1"
BASE COURSE - TYPE II	3"	1"
FINE GRADED GRAVEL SUBBASE, VAOT ITEM 704.05A	12"	12"
DENSE GRADED GRAVEL SUBBASE, VAOT ITEM 704.06A	12"	



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TOWN OF CASTLETON, VERMONT

CRYSTAL HEIGHTS SEWERLINE EXTENSION CONTRACT No.1

ROADWAY DEATAILS

PROJECT NO. DRAWN EDS DATE

FEB. 2024

NOTES:

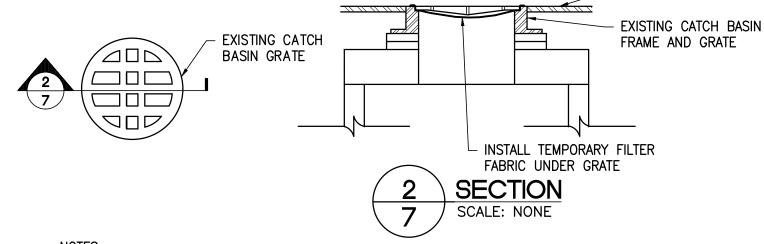
1. SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR APPROVED EQUAL.

- 2. INSTALL WHERE SHOWN ON PLANS. THE FENCE SHALL BE INSTALLED PARALLEL TO CONTOURS WHERE POSSIBLE. THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.
- 3. SECTIONS OF THE SILT FENCE SHALL BE JOINED TO OVERLAP BY FOLDING FABRIC AROUND EACH POST ONE FULL TURN. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OR BUILT-UP SEDIMENT AT JOINT.
- 4. INSPECT ALL SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF THE SILT FENCE.

— EXISTING PAVEMENT

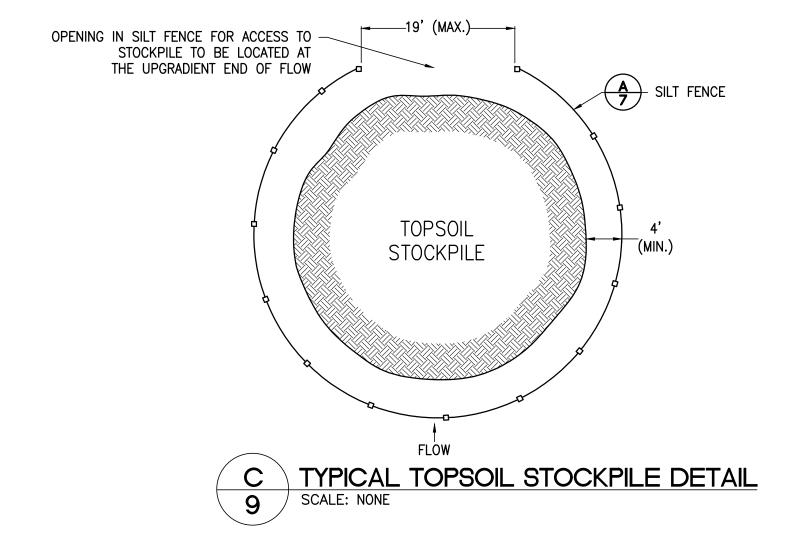
5. UPON FINAL STABILIZATION OF THE AREA UPHILL OF THE FABRIC, THE FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE OWNER.





- 1. UNDERGRATE FABRIC INLET PROTECTION SHALL ONLY BE USED WHERE SHOWN ON PLANS. IT SHOULD ONLY BE USED FOR EXISTING CATCH BASINS IN EXISTING PAVED AREAS FOR LINEAR PIPELINE PROJECTS WHERE AMOUNT OF SEDIMENT RUN OFF IS MINIMAL AND DURATION OF CONSTRUCTION IS SHORT.
- 2. LIFT THE GRATE AND INSTALL FILTER FABRIC (MIRAFI 140NL OR EQUAL) OVER THE FRAME, AND THEN SET GRATE BACK IN PLACE.
- 3. INSPECT EACH INLET AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EVERY RAINFALL. REPAIR AND REPLACEMENT OF INLET PROTECTION SHALL BE MADE AT TIME OF INSPECTION.
- 4. UPON STABILIZATION OF THE AREA UPSTREAM FROM THE INLET, THE PROTECTION FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE OWNER.





EROSION CONTROL NOTES:

- 1. EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO PERFORMING ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE OWNER. THE MEASURES SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MEASURES DETERMINED NECESSARY IN THE FIELD.
- 2. SILT FENCE SHALL BE INSTALLED, AS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE OWNER. THE SILT FENCE SHALL BE MAINTAINED AND CLEANED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE OWNER. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHALL BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
- 3. DEGRADABLE EROSION CONTROL BLANKETS SHALL BE INSTALLED ON DISTURBED VEGETATED SLOPES THAT HAVE SLOPES GREATER THAN 3:1. THE CONTRACTOR SHALL INSTALL THE DEGRADABLE EROSION CONTROL BLANKETS PER MANUFACTURER'S RECOMMENDATIONS.
- 4. PROPER EROSION CONTROLS SHALL BE PROVIDED AROUND STOCKPILED EXCAVATED MATERIALS. THESE CONTROLS MAY INCLUDE, BUT NOT DRAINAGE DITCHES; VELOCITY REDUCTION DAMS IN DRAINAGE DITCHES; TEMPORARY BANK PROTECTION SUCH AS RIPRAP, MATTING, OR ARTIFICIAL COVERING; STONE CHECK DAM CONTROL SYSTEMS; SPECIAL STOCKPILING METHODS; AND WATER BARS.
- 5. THE CONTRACTOR SHALL PROVIDE A MECHANICAL SWEEPER AND SHALL SWEEP CLEAN THE ROADS IN THE CONSTRUCTION AREAS AS REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND PREVENT SEDIMENT RUNOFF INTO RECEIVING WATERS AND AS DIRECTED BY THE
- 6. TEMPORARY EROSION CONTROL MEASURES SHALL BE UTILIZED BY THE CONTRACTOR AS REQUIRED TO PREVENT ANY SEDIMENTATION FROM RUNNING INTO RECEIVING WATERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE ANY IMPACT OF THE ON-SITE SURFACE RUNOFF ON THE QUALITY OF THE RECEIVING WATERS.
- 7. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS DISTURBED DURING CONSTRUCTION, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE OWNER. LAND SHALL NOT BE LEFT DISTURBED DURING THE WINTER MONTHS AND OVERWINTER STABILIZATION MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15TH.
- 8. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOAMED, LIMED, FERTILIZED, SEEDED, AND MULCHED WITHIN 48 HOURS OF FINAL GRADING. A MINIMUM OF 3 INCHES OF LOAM SHALL BE
- 9. NO DISTURBED AREAS SHALL BE LEFT UNSEEDED AND UNMULCHED FOR MORE THAN SEVEN (7) DAYS, DISTURBED AREAS WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL. CONTRACTOR MAY ALSO USE EROSION MATTING OR OTHER APPROVED METHODS OF TEMPORARY COVER.
- 10. IF SUBSURFACE CONTAMINATED SOILS ARE ENCOUNTERED, WORK WILL STOP AND THE PROJECT OWNER SHALL BE NOTIFIED UPON DISCOVERY OF THE CONDITION. OWNER SHALL CONTACT SPILLS/SITES MANAGEMENT SECTION OF THE VERMONT DEC. SOIL STOCKPILING AND DISPOSAL OPTIONS MAY BE AFFECTED BY THE CHARACTERISTICS OF THE AFFECTED MATERIAL.
- 11. ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE ON-SITE COORDINATOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE.
- 12. AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE OWNER, THE DOWNSTREAM TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE ACCUMULATED SEDIMENT PROPERLY DISPOSED OF. THE AREA DISTURBED BY THE REMOVAL OF TEMPORARY MEASURES SHALL BE PREPARED, SEEDED, AND MULCHED.

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DESCRIPTION									
DATE									
No.									

TOWN OF

CASTLETON,

VERMONT

CRYSTAL HEIGHTS

SEWERLINE

EXTENSION

CONTRACT No.1

EROSION CONTROL DETAILS AND NOTES

DESIGNED

DRAWN EDS CHECKED JRL DATE FEB. 2024 PROJECT NO.

23054