

LOCATION MAP
SCALE: 1:2,000

LEGEND:

- PROPERTY LINE
- OVERHEAD WIRE
- DRAINAGE PIPE
- CONTOUR
- CHAIN LINK FENCE
- RETAINING WALL
- STONE WALL
- TREE LINE
- STREAM
- CATCH BASIN
- SEWER MANHOLE
- UTILITY POLE
- WELL
- DRILL HOLE
- IRON PIN, IRON PIPE
- MERESTONE, CONNECTICUT HIGHWAY DEPARTMENT, MONUMENT
- FOUND, SET
- NOW OR FORMERLY
- DEED VOLUME & PAGE

SURVEY NOTES

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS FOR STATE AGENCIES "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
 - A. TYPE OF SURVEY: EXISTING CONDITIONS SURVEY
 - B. BOUNDARY DETERMINATION CATEGORY: RESURVEY
 - C. HORIZONTAL ACCURACY: CLASS A-2
 - VERTICAL ACCURACY: CLASS V-2
 - TOPOGRAPHIC ACCURACY: CLASS T-2
 - D. INTENT: TO DEPICT CURRENT LOCATION OF DRAINAGE STRUCTURES AND SURROUNDING TOPOGRAPHY ON BEECHWOOD ROAD IN OAKDALE, CT.
 - E. BOUNDARY INFORMATION SHOWN ON THIS PLAN WAS COMPILED FROM OTHER MAPS, RECORD RESEARCH OR OTHER SOURCES OF INFORMATION. IT IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY AND IS SUBJECT CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.
- LATEST DATE OF FIELD WORK: 01/23/2024
- HORIZONTAL GRID IS NAD83 AND VERTICAL DATUM IS NAVD88 BOTH DETERMINED BY LOCAL GPS OBSERVATIONS.

I HAVE REVIEWED THE WETLANDS ON THE PROPERTY IN THE FIELD AND HAVE REVIEWED THE WETLANDS AS SHOWN ON THE PLAN AND FIND THAT THEY SUBSTANTIALLY REPRESENT THE WETLANDS AS DELINEATED IN THE FIELD.

R.C. Russo

ROBERT C. RUSSO
CERTIFIED SOIL SCIENTIST

TO MY KNOWLEDGE AND BELIEF THIS PLAN IS SUBSTANTIALLY CORRECT AS NOTED OR DEPICTED HEREON.

RYAN J. CHEVERIE, L.L.S. #70454

CLA Engineers, Inc.

CIVIL • STRUCTURAL • SURVEYING

317 Main Street Norwich, CT 06360
(860) 886-1966 Fax (860) 886-9165

No.	DATE	REVISION

TOWN OF MONTVILLE

62 BEECHWOOD ROAD
DRAINAGE IMPROVEMENTS

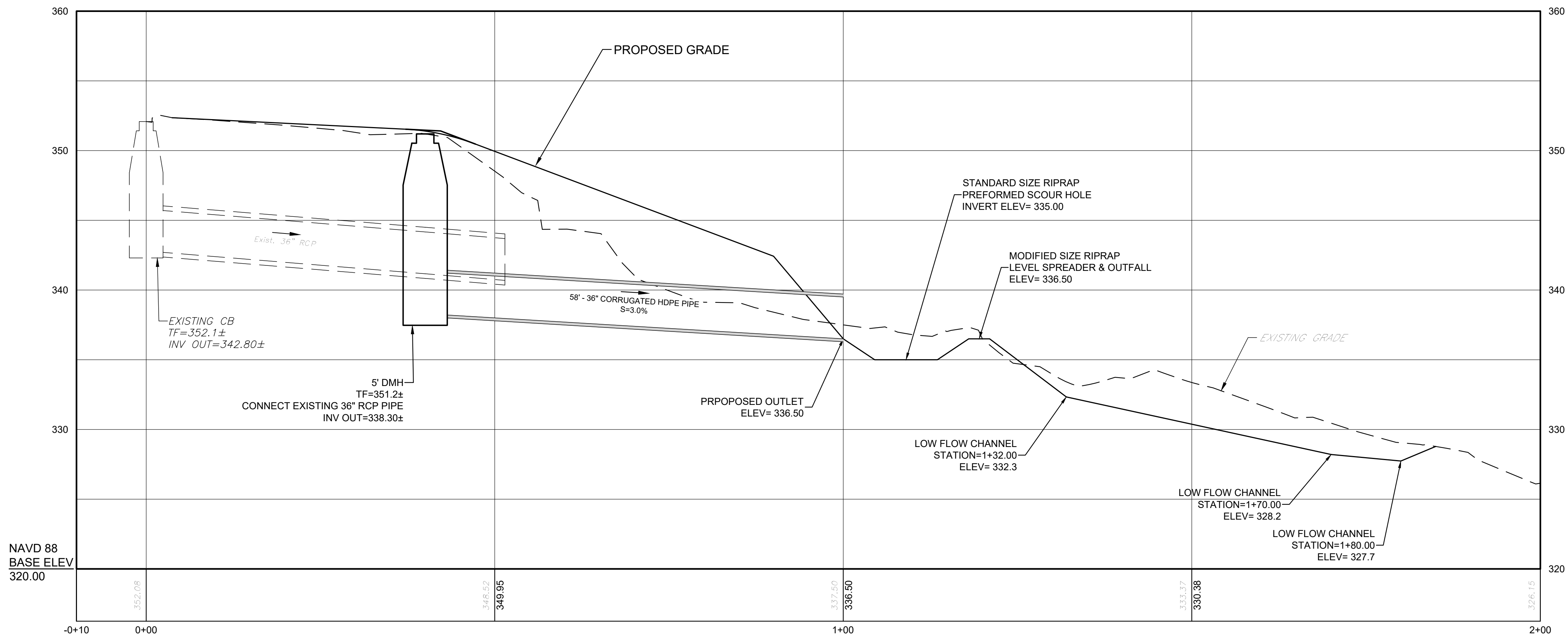
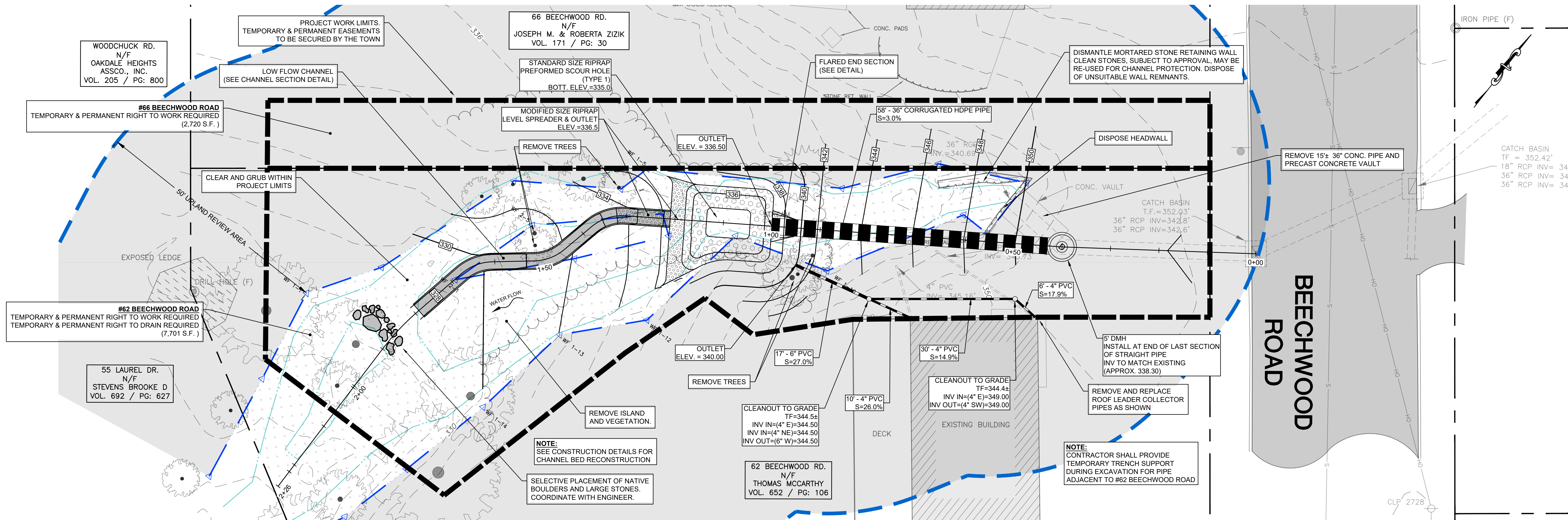
DRAINAGE LOCATION & TOPOGRAPHY

Project No.
CLA-6767J

Proj. Engineer
R.J.C.

Date:
JAN 2024

Sheet No.
1

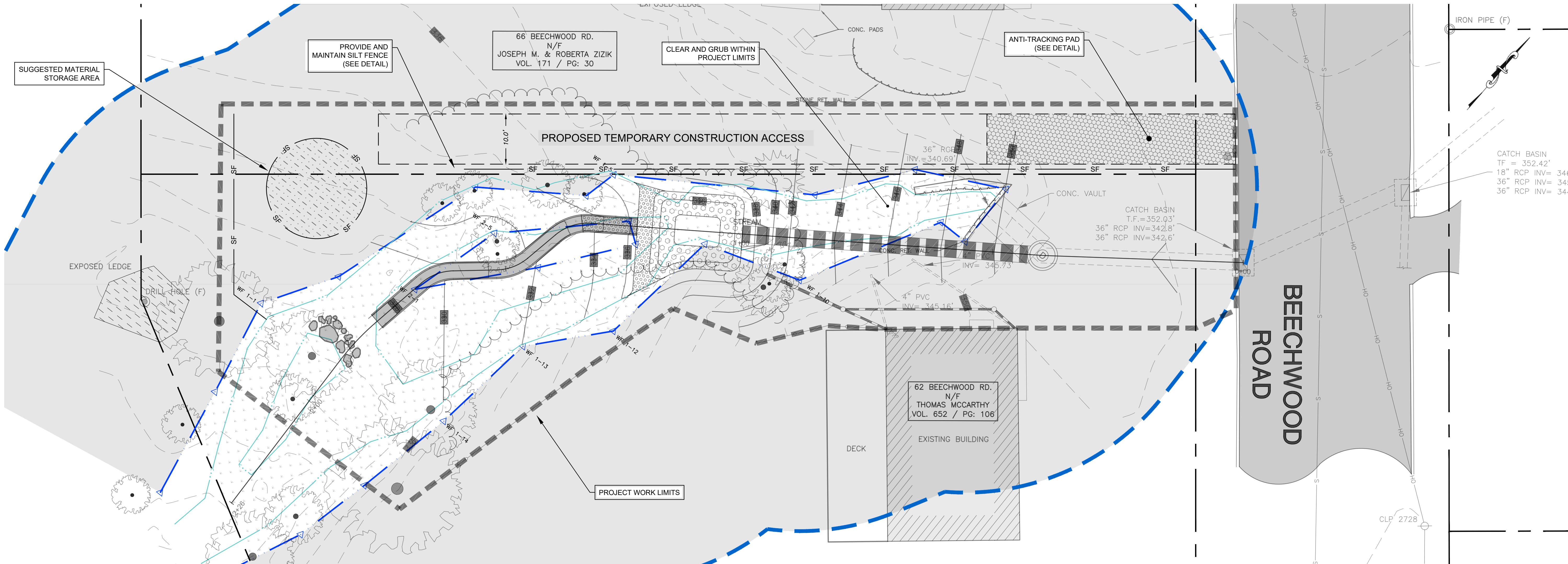


PROFILE ALONG LOW FLOW CHANNEL STA -0+10 TO STA 2+00
HORIZ. SCALE = 1" = 4'
VERT. SCALE = 1" = 2'

GENERAL NOTES

- GROUND LINE AS SHOWN ON THESE PLANS IS BASED ON FIELD SURVEY.
- CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 PRIOR TO THE START OF CONSTRUCTION.
- TEMPORARY CONSTRUCTION ACCESS HAS BEEN SECURED TO #62 AND #66 BEECHWOOD ROAD. THE CONTRACTOR SHALL NOT ENCROACH BEYOND THE LIMITS SHOWN ON THE PLANS.
- INFORMATION SHOWN ON THE DRAWINGS RELATING TO MATERIALS, CONDITIONS, AND OR LOCATIONS OF EXISTING STRUCTURES AND UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING FIELD SURVEY, UTILITY COMPANY AND TOWN RECORD MAPS AND DRAWINGS, AND IS NOT GUARANTEED ACCURATE OR COMPLETE. ALL UTILITIES SHALL BE LOCATED IN THE FIELD BY THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER WARRANTS OR GUARANTEES THE CONDITIONS SHOWN ON THE PLANS.
- ALL PROPOSED WORK MAY BE VARIED IN THE FIELD BY THE OWNER TO MATCH EXISTING CONDITIONS.
- THE CONTRACTOR SHALL CONFINE OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINES AND/OR EASEMENTS AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT, ROADWAY, SIDEWALKS, ETC., OUTSIDE OF THE WORK AREA AND SHALL REPAIR SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
- UPON COMPLETION OF THE WORK, ALL DISTURBED AREAS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED PRIOR TO CONSTRUCTION.
- ALL STREET SIGNS, MAILBOXES, PLANTINGS, ORNAMENTAL OBJECTS, LIGHTS, LANDSCAPE SHRUBBERY, ETC., SHALL BE PROTECTED FROM DAMAGE AND SHALL BE REPLACED IN THE SAME OR BETTER CONDITION BY THE CONTRACTOR IF DISTURBED OR DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION.
- THE RESIDENTS ABUTTING CONSTRUCTION SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST ONE WEEK BEFORE CONSTRUCTION BEGINS AND SHALL BE ALLOWED ACCESS TO THEIR PROPERTY.
- IF IT IS DEEMED NECESSARY BY THE OWNER THAT THE CONTRACTOR EXECUTE WORK AT CERTAIN POINTS IN THE CONTRACT AT CERTAIN TIMES AND SEASONS, THE CONTRACTOR SHALL PERFORM SAID WORK AT NO ADDITIONAL EXPENSE TO THE OWNER, WITHIN THE TIME SET FORTH IN THE CONTRACT.
- MATERIAL STOCKPILE AND STAGING AREAS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION OF STOCKPILE, MATERIAL STORAGE AND EQUIPMENT STORAGE AREAS. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL IDENTIFY THESE AREAS AND PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED.
- CLEARING AND GRUBBING: ALL TREES, BRUSH, VEGETATION, ETC. SHALL BE CUT DOWN BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL GIVE ABUTTING PROPERTY OWNERS THE OPPORTUNITY TO TAKE CUT WOOD FOR THEIR PRIVATE USE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL REMAINING STUMPS, CUT-UP TREES & LIMBS, ETC. WITHIN THE CONTRACT LIMITS. ALL COSTS ASSOCIATED WITH THE ABOVE WORK SHALL BE INCLUDED IN OTHER ITEMS CONTRACTOR SHALL PROTECT REMAINING TREES FROM DAMAGE DURING CONSTRUCTION. TREES UNNECESSARILY CUT OR DAMAGED BY THE CONTRACTOR'S FORCES SHALL BE REPLACED, OF COMPARABLE SIZE AND TYPE, BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING TO GRADE ALL FRAMES, GRATES, COVERS, VALVE BOXES, ACCESS COVERS, AND ALL OTHER ITEMS WHICH NORMALLY MUST HAVE A FIXED RELATION TO FINISHED GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY AND STAKEOUT AS THEY NEED.
- ALL WORK TO CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION SUPPLEMENTED FORM 818, DATED 2020.

			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	TOWN OF MONTVILLE	
			BEECHWOOD ROAD CULVERT REPLACEMENT	
			PLAN & PROFILE	
			Project No. CLA-6767J	Proj. Engineer D.P.H.
			Date: 06/05/25	Sheet No. 2



EROSION & SEDIMENTAION CONTROL NARRATIVE

1. THE EROSION & SEDIMENTATION CONTROL PLAN AND DETAILS HAVE BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE "2020 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEEP."
2. THE PROPOSED LOCATIONS OF SEDIMENT AND EROSION CONTROL MEASURES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE SILT FENCE, STONE CHECK DAMS AND/OR OTHER EROSION CONTROL MEASURES AS NEEDED OR DIRECTED BY THE ENGINEER OR TOWN STAFF TO ADEQUATELY PREVENT SEDIMENT TRANSPORT.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE. TOWN STAFF SHALL REVIEW AND APPROVE THE INSTALLATION PRIOR TO EXCAVATION.
4. THE CONTRACTOR SHALL INSPECT, REPAIR AND/OR REPLACE EROSION CONTROL MEASURES EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT. SEDIMENT DEPOSITS MUST BE REMOVED WHEN WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
5. STAKED HAY BALE SILT BARRIERS OR SILT FENCE SHALL BE INSTALLED AROUND ANY TEMPORARY STOCKPILE AREAS. TEMPORARY VEGETATIVE COVER MAY BE REQUIRED (SEE NOTE).
6. INLET SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED UNDER THE GRATES OF ALL NEW CATCH BASINS AT THE TIME OF INSTALLATION, AND UNDER THE GRATES OF EXISTING CATCH BASINS IN THE CONSTRUCTION AREA.
7. CONTINUOUS DUST CONTROL USING WATER, CALCIUM CHLORIDE OR APPROVED EQUAL SHALL BE PROVIDED FOR ALL EARTH STOCKPILES, EARTH PILED ALONG EXCAVATIONS, SURFACES OF BACKFILLED TRENCHES AND GRAVELED ROADWAY SURFACES.
8. IF DEWATERING IS NECESSARY DURING ANY TIME OF CONSTRUCTION A CLEAR WATER DISCHARGE SHALL BE PROVIDED (SEE DEWATERING PLAN).
9. ALL DISTURBED AREAS SHALL BE RESTORED PER THE SLOPE STABILIZATION AND PERMANENT VEGETATION DETAILS. ALL DISTURBED AREAS THAT ARE SLOPED LESS THAN THREE HORIZONTAL TO ONE VERTICAL (3:1) SLOPE SHALL BE LOAMED, SEEDED, FERTILIZED AND MULCHED PER THE PERMANENT VEGETATIVE COVER SPECIFICATIONS. EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL DISTURBED AREAS WITHIN 10 FEET OF THE STREAM BED AND THAT ARE SLOPED MORE THAN THREE HORIZONTAL TO ONE VERTICAL (3:1).
10. IF FINAL SEEDING OF DISTURBED AREAS IS NOT TO BE COMPLETED BEFORE OCTOBER 15, THE CONTRACTOR SHALL PROVIDE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING.
11. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISHED GRADED SHALL BE COMPLETED PRIOR TO OCTOBER 15.
12. ANY EROSION WHICH OCCURS WITHIN THE DISTURBED AREAS SHALL BE IMMEDIATELY REPAIRED AND STABILIZED. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE RETURNED TO THE SITE. POST SEEDING, INTERCEPTED SEDIMENT, IF ANY, SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE TOWN AND ENGINEER.
13. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS RE-ESTABLISHED OR SLOPES ARE STABILIZED AND REMOVAL IS APPROVED BY THE TOWN.
14. UNFORESEEN PROBLEMS WHICH ARE ENCOUNTERED IN THE FIELD SHALL BE SOLVED ACCORDING TO THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEEP."
15. IF NECESSARY, THE PUBLIC WORKS DEPARTMENT OR THE OWNER WILL BE PREPARED TO STEP IN AND TAKE ACTION TO ADDRESS ANY POTENTIAL EROSION PROBLEMS. ANY WORK DONE BY THE PUBLIC WORKS DEPARTMENT OR THE OWNER WILL BE BACK CHARGED TO THE CONTRACTOR.
16. THE CONTRACTOR SHALL PROVIDE THE NAME AND EMERGENCY CONTACT INFORMATION FOR THE PROJECT PERSONNEL RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROLS.

PERMANENT VEGETATIVE COVER

TOPSOIL WILL BE REPLACED ONCE THE EXCAVATIONS HAVE BEEN COMPLETED AND THE SLOPES ARE GRADED AS SHOWN ON THE PLANS. PROVIDE SLOPE PROTECTION AS CALLED FOR ON THE PLANS AND DETAILS. TOPSOIL SHALL BE SPREAD AT A MINIMUM COMPACTED DEPTH OF 4 INCHES. ONCE THE TOPSOIL HAS BEEN SPREAD, ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION WILL BE REMOVED AS WELL AS DEBRIS. APPLY AGRICULTURAL GROUND LIMESTONE AT THE RATE OF TWO TONS PER ACRE OR 100 LBS. PER 1000 S.F. APPLY 10-10-10 FERTILIZER OR EQUIVALENT AT A RATE OF 300 LBS. PER ACRE OR 7.5 LBS. PER S.F. WORK LIMESTONE INTO THE SOIL TO A DEPTH OF 6 INCHES. INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS COMPACTED THE SOIL, RETILL COMPACTED AREAS. APPLY THE FOLLOWING GRASS SEED MIX:

TYPICAL SEED MIXTURE

ALL DISTURBED AREAS

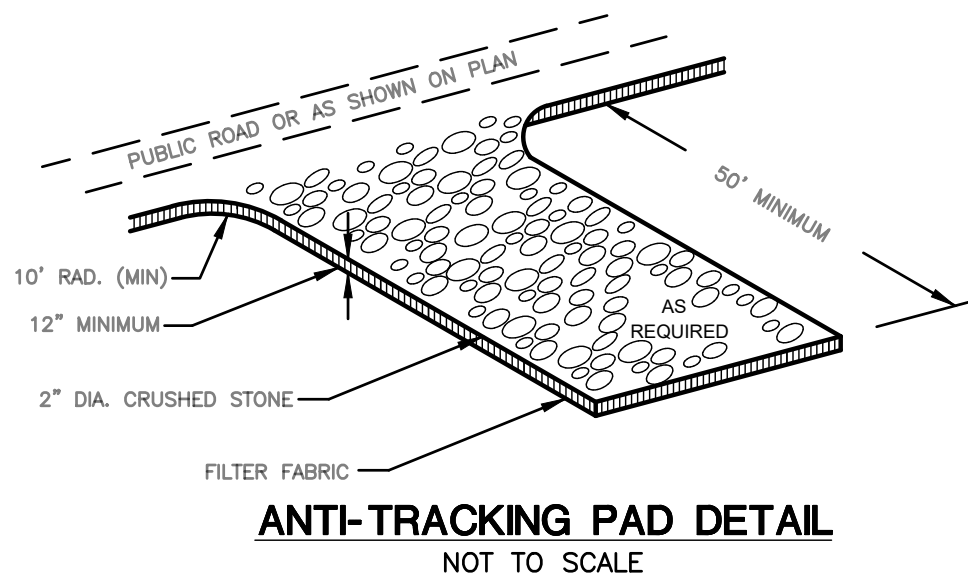
	LBS./ACRE	LBS./1000 S.F.
KENTUCKY BLUEGRASS	20	0.45
CREeping RED FESCUE	5	0.10
PERENNIAL RYEGRASS	45	1.00

TYPICAL SEED MIXTURE FOR NON-MOWED SLOPES (3:1 OR STEEPER)

CT DEEP SEED MIX NO. 26	LBS./ACRE	LBS./1000 S.F.
SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK)	4.0	0.10
BIG BLUESTEM (NIAGRA, KAW)	4.0	0.10
LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER)	2.0	0.05
SAND LOVEGRASS (NE-27, BEND)	1.5	0.03
BIRD'S-FOOT TREFOIL (EMPIRE VIKING)	2.0	0.05
	13.5	0.33

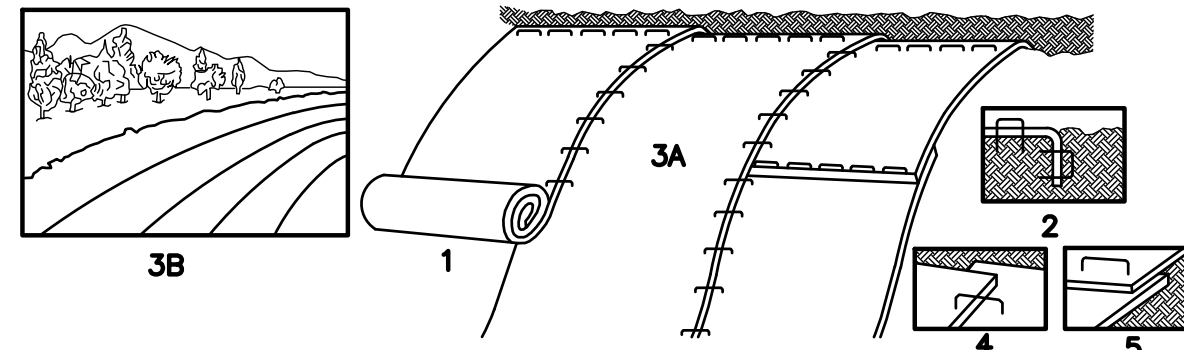
THE RECOMMENDED SEEDING DATES ARE:
APRIL 1 - JUNE 15 AND AUGUST 15 - OCTOBER 15

IMMEDIATELY FOLLOWING SEEDING, FIRM SEED BED WITH A ROLLER AND MULCH WITH WEED FREE STRAW. IF PERMANENT VEGETATIVE COVER IS HAS NOT BEEN ESTABLISHED BY OCTOBER 15, APPLY A TEMPORARY VEGETATIVE COVER ON THE TOPSOIL.



THE CONTRACTOR SHALL CONTINUALLY STORE THE FOLLOWING MATERIALS ONSITE DURING CONSTRUCTION TO MEET UNEXPECTED EROSION NEEDS

- 100 LF OF SILT FENCE
- 10 HAY BALES
- WOOD CHIPS OR CRUSHED STONE



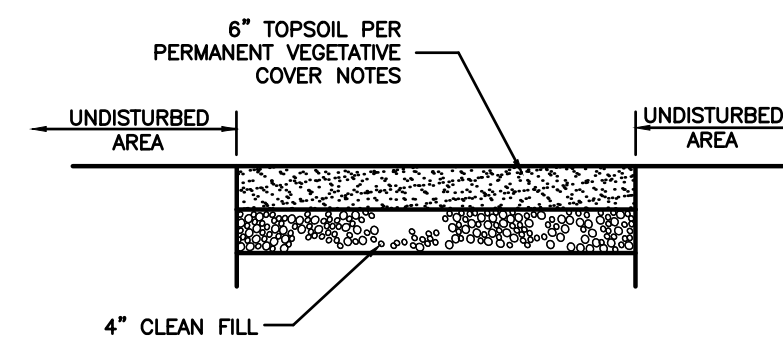
- INSTALLATION NOTES:**
1. PROVIDE 4" THICKNESS OF TOPSOIL OVER CLEAN FILL. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED MIX PER PERMANENT VEGETATIVE COVER NOTES. (SHALL BE PAID FOR AT THE UNIT PRICE FOR LOAM, SEED, FERTILIZER & MULCH)
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP x 6" WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 3. ROLL THE BLANKET (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
 5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

- PRODUCT NOTES:**
1. EROSION CONTROL MATTING MUST BE LISTED ON THE LATEST CT DOT QUALIFIED PRODUCTS LIST UNDER CLASS 1 SLOPE PROTECTION, TYPE D.

EROSION CONTROL MATTING DETAIL (FOR 3:1 SLOPES OR STEEPER)

- NOTES:**
1. HYDROSEED SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 9.50.3.3 OF DOT FORM 818.
 2. BONDED FIBER MATRIX (BFM) OR FLEXIBLE GROWTH MEDIUM (FGM) MUST BE INCLUDED IN THE HYDROSEED SLURRY. MIX RATE PERCENTAGES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE FINISHED SLOPES. THE FOLLOWING ARE ACCEPTABLE PRODUCTS:
 - A. PROFILE FLEXITERRA FOM
 - B. PROFILE HYDRO-BLANKET BONDED FIBER MATRIX
 - C. MAT, INC. SOIL GUARD BONDED FIBER MATRIX
 - D. NORTH AMERICAN GREEN HYDRA CT OR HYDRA CM
 3. THE REQUIRED SEED MIX SHALL BE IN ACCORDANCE WITH THE PERMANENT VEGETATIVE COVER NOTES. ALL APPLICATION RATES SHALL BE INCREASED BY 10% FOR HYDROSEEDING.
 4. THE CONTRACTOR SHALL ENSURE 100% COVERAGE OF THE DISTURBED SOIL.

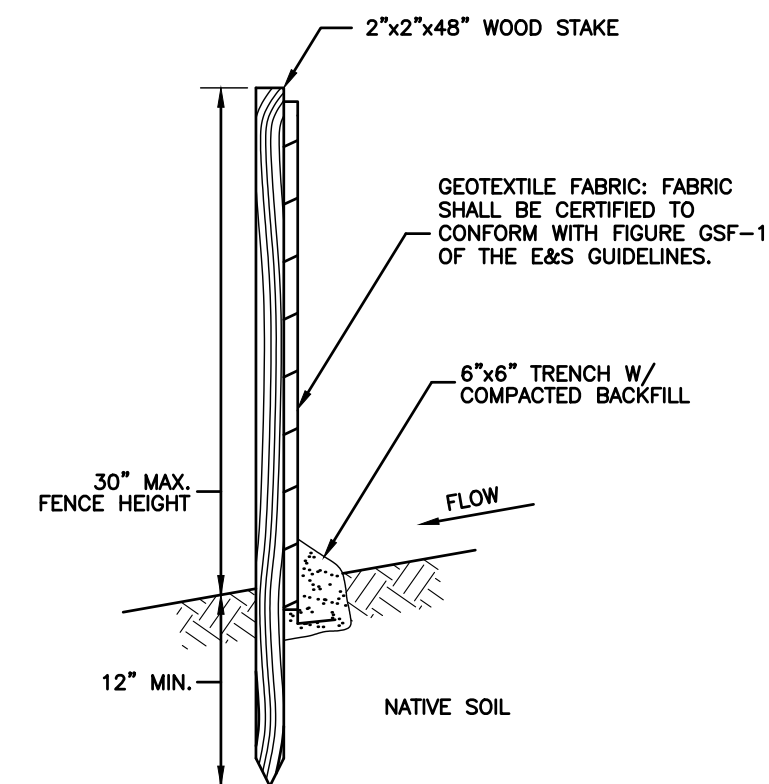
HYDROSEED REQUIREMENTS (FOR 3:1 SLOPES OR STEEPER)



TYPICAL LOAM & SEED SECTION DETAIL (FOR ALL STABILIZED AREAS)

SLOPE STABILIZATION DETAILS

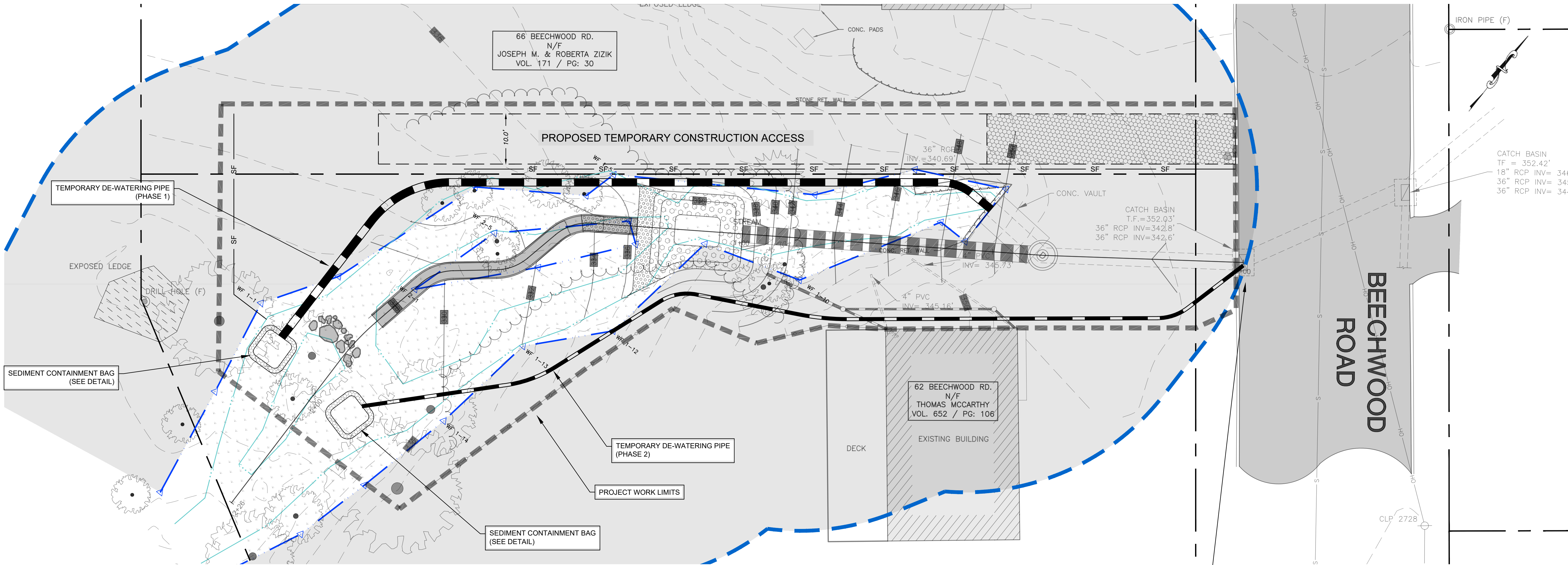
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SILT FENCE SECTION

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No.	DATE	REVISION	Project No. CLA-6767J
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			Date: 06/05/25
			Sheet No.
			3
TOWN OF MONTVILLE			
BEECHWOOD ROAD CULVERT REPLACEMENT			
EROSION & SEDIMENTATION CONTROL PLAN			



GENERAL NOTES

1. THE EXCAVATIONS FOR WORK REQUIRED BY THIS CONTRACT ARE WITHIN A PERENNIAL STREAM AND BELOW EXISTING GROUND WATER LEVELS. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL MEASURES NECESSARY FOR THE CONTROL, COLLECTION, DISPOSAL AND/OR DIVERSION OF ALL SURFACE AND SUB-SURFACE WATER ENCOUNTERED. ALL EXCAVATIONS SHALL BE PERFORMED IN THE DRY.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL TEMPORARY BYPASS, WATER CONTROL, SURFACE WATER AND GROUNDWATER CONTROL AS NEEDED TO COMPLETE THE WORK SHOWN ON THE CONTRACT DRAWINGS. CONTROLS SHOWN ON THE CONTRACT DRAWINGS AND OUTLINED IN THE TECHNICAL SPECIFICATIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL EMPLOY WHATEVER SUPPLEMENTARY MEASURES NECESSARY TO PROTECT THE SITE, PRIVATE PROPERTY AND THE WORK.
3. IT IS REQUIRED THAT CONSTRUCTION FOR THIS CONTRACT TAKE PLACE DURING SUMMER LOW FLOW CONDITIONS BETWEEN JULY 1 – SEPTEMBER 30.
4. THROUGHOUT CONSTRUCTION AND DE-WATERING, MONITOR WEATHER TO AVOID WORKING IN HIGH FLOWS AND RELOCATE STORED MATERIAL AS FORECAST WARRANTS.
5. PROVIDE SHOP DRAWINGS, MATERIALS SIZING, PUMP SPECIFICATIONS, AND SEQUENCING SUBMITTALS TO THE TOWN AND ENGINEER FOR REVIEW, COMMENT, AND APPROVAL. ALLOW AT LEAST 14 DAYS FOR TOWN AND ENGINEER REVIEW, COMMENT, AND APPROVE.
6. THE CONTRACTOR SHALL PROVIDE THE NAME AND EMERGENCY CONTACT INFORMATION FOR THE PROJECT PERSONNEL RESPONSIBLE FOR WATER HANDLING AND BYPASS OPERATIONS PRIOR TO THE START OF CONSTRUCTION.
7. THE TOWN AND THE ENGINEER SHALL BE NOTIFIED AT LEAST 5 BUSINESS DAYS PRIOR TO THE START OF INSTALLATION OF THE TEMPORARY BYPASS PIPING AND APPURTENANCES.
8. NO BYPASSING SHALL COMMENCE WITHOUT PRIOR WRITTEN CONSENT FROM THE TOWN OR ENGINEER.
9. ONCE APPROVAL HAS BEEN GRANTED, THE CONTRACTOR SHALL MONITOR PRECIPITATION, AND DOWNSTREAM CONDITIONS DURING OPERATIONS. INSTALL APPROPRIATE CONTROLS AS PART OF THE TEMPORARY BYPASS SYSTEM TO REGULATE FLOW AND PREVENT ANY EROSION AND SEDIMENTATION ISSUES AT THE DISCHARGE.
10. THE TEMPORARY BYPASS MAY BE SUPPLEMENTED WITH PUMPS TO SUPPLEMENT EFFICIENCY AND CAPACITY OF DIVERSION OPERATIONS. PROVIDE SCREENS ON ANY PUMP SUCTION INLETS, PROVIDE FLOW DIFFUSERS OR DISCHARGE TO RIP SPLASH PADS TO PREVENT EROSION AT THE DISCHARGE.
11. MONITOR THE BYPASS SYSTEM DAILY AND CONTINUOUSLY. MAKE ADJUSTMENTS AS NEEDED TO MAINTAIN FLOW DIVERSION THROUGH THE SYSTEM DURING CONSTRUCTION OPERATIONS.
12. INSPECT RIP-RAP SPLASH PAD AT THE PIPE DISCHARGE DAILY AND REMOVE AND DISPOSE OF ANY ACCUMULATED SEDIMENT AND MAINTAIN THE SPLASH PAD AS NEEDED.
13. IF REQUIRED, ESTABLISH A HAY BALE DEWATERING STRUCTURE DOWN STREAM OF THE WORK AREA FOR USE IN GROUNDWATER AND SURFACE WATER CONTROL AS SHOWN ON THE PLANS. SIZE THE STRUCTURE AS CALLED FOR IN THE DETAILS BASED ON THE CONTRACTOR'S PUMP DISCHARGE RATE.
14. INSPECT THE STREAM CHANNEL DOWNGRADE OF THE DISCHARGES FOR ANY SIGNS OF EROSION DUE TO THE TEMPORARY BYPASS/DEWATERING ACTIVITIES. CONTACT THE ENGINEER AND ADJUST THE DISCHARGE OR SPLASH PAD SIZING IF THERE ARE SIGNS OF EROSION.
15. THE CONTRACTOR SHALL CONTINUOUSLY MONITOR THE WEATHER CONDITIONS, WEATHER FORECASTS, AND POND WATER SURFACE ELEVATIONS THROUGHOUT THE DURATION OF CONSTRUCTION.
16. IN THE CASE OF AN UNEXPECTED STORM EVENT, THE CONTRACTOR SHALL STOP WORK AND MONITOR DIVERSION OPERATIONS TO ENSURE THE SAFETY OF THE WORK SITE AND PRIVATE PROPERTY.
17. AFTER ALL WORK TO THE STREAM CHANNEL HAS BEEN COMPLETED AND APPROVAL HAS BEEN GRANTED BY THE TOWN AND ENGINEER, THE TEMPORARY BYPASS MAY BE STOPPED. THE CONTRACTOR SHALL REMOVE ALL DE-WATERING OPERATIONS AND RESTORE DISTURBED AREAS ACCORDING TO THE REQUIREMENTS AND DETAILS ON THE E&S PLAN.

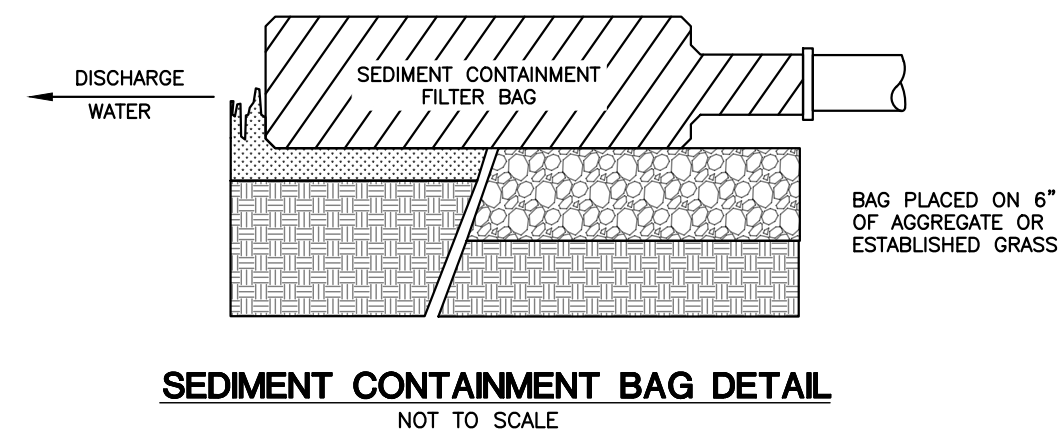
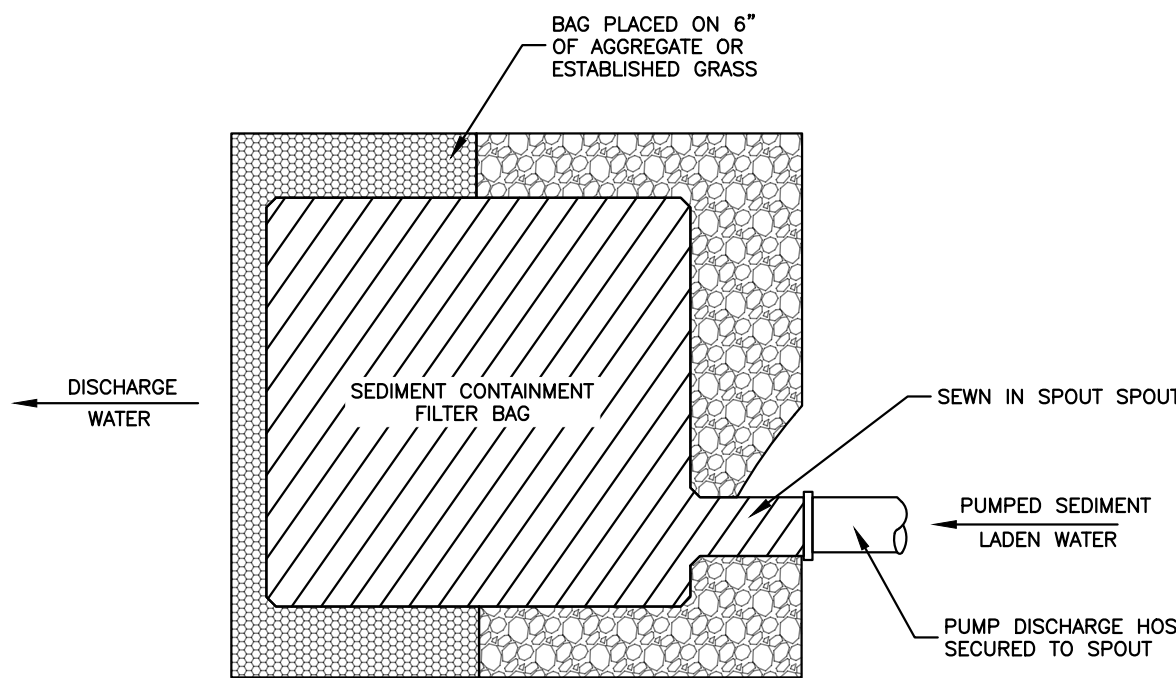
DE-WATERING & CONTROL OF WATER PLAN

1. THE PLAN HAS BEEN DEVELOPED FOR A TEMPORARY BYPASS SYSTEM. THE CONTRACTOR MAY PROPOSE ALTERNATE MEANS AND METHODS FOR TEMPORARY BYPASS AND SURFACE AND GROUNDWATER CONTROL. PROPOSED ALTERNATE MEANS AND METHODS FOR THE TEMPORARY BYPASS AND SURFACE AND GROUNDWATER CONTROL SHALL BE PREPARED, AND SUBMITTED TO THE ENGINEER FOR PRIOR TO IMPLEMENTATION. ANY ALTERNATE PROPOSAL FOR THESE MEANS AND METHODS SHALL BE SUBJECT TO REVIEW AND APPROVAL FROM THE TOWN AND ENGINEER AND ARE NOT GUARANTEED TO BE APPROVED.
2. THE TEMPORARY BYPASS MUST BE CAPABLE OF CONVEYING 27 CFS (12,100).
3. THE FOLLOWING MAY BE UTILIZED BY THE CONTRACTOR OR MODIFIED TO ENSURE THE CONTRACT SPECIFIC REQUIREMENTS OF THIS PROJECT ARE MET. ANY MODIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO WORK COMMENCING.
4. DE-WATERING OPERATIONS MAY BE PHASED ACCORDING TO THE LOCATION AND TYPE OF WORK BEING PERFORMED.

PHASE 1
THE EXISTING CONCRETE VAULT IS TO BE REMOVED AND DISPOSED AS PART OF THE WORK. UNTIL SUCH TIME THIS OCCURS, THE VAULT MAY BE MODIFIED IN SUCH A WAY AS TO FORM A COLLECTION POINT FROM WHICH TO DIVERT WATER AROUND THE WORK AREA. WATER MAY BE PIPED FROM THE VAULT AND DISCHARGED DOWNSTREAM OF THE WORK AREA (PHASE 1). PIPE SIZE SHALL BE DETERMINED BY THE CONTRACTOR A MINIMUM PIPE SIZE OF 15" IS RECOMMENDED.

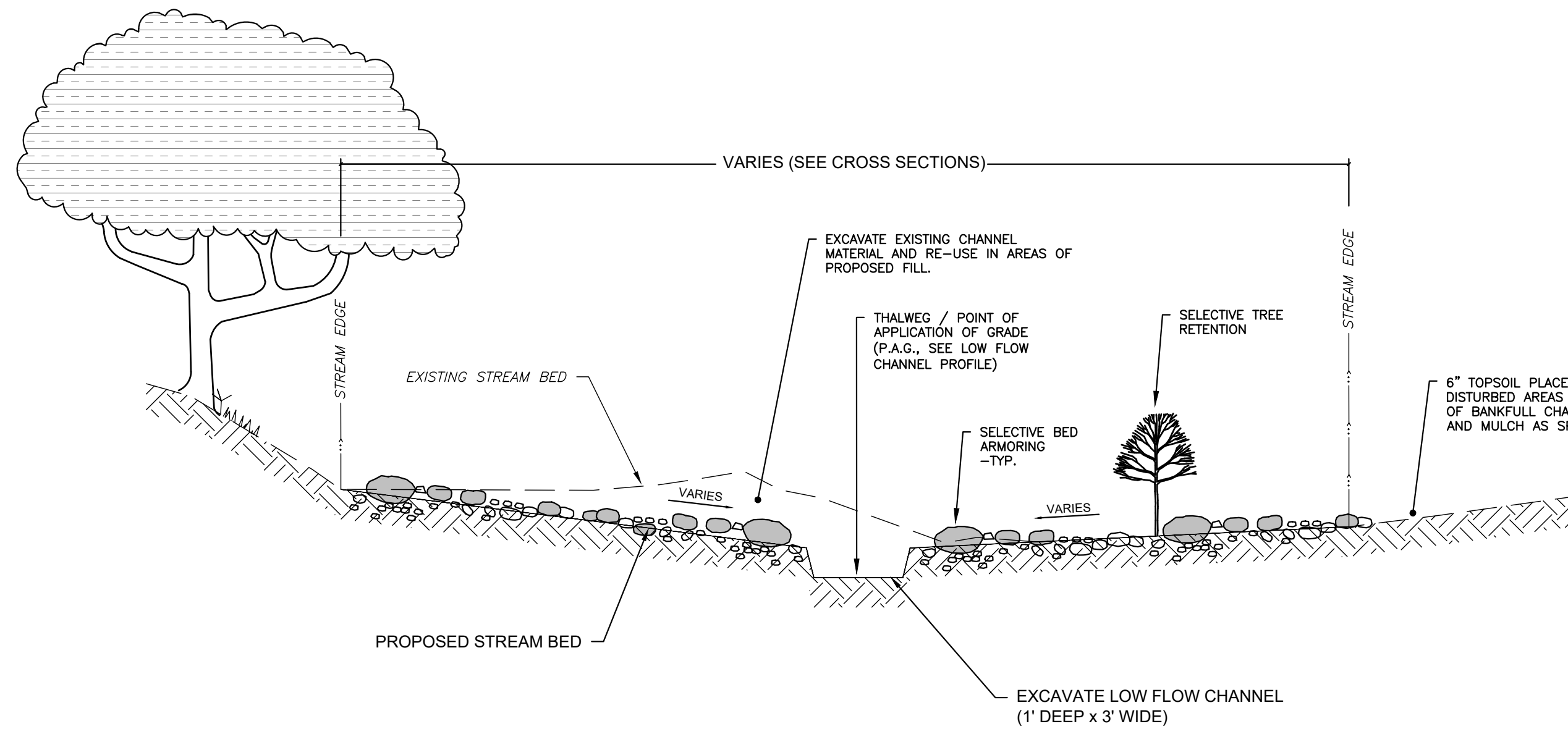
PHASE 2
AT SUCH TIME THE EXISTING CONCRETE VAULT IS REQUIRED TO BE REMOVED AND THE PROPOSED DRAINAGE MANHOLE INSTALLED, STREAM FLOW MAY BE INTERCEPTED AT THE EXISTING CATCH BASIN ON BEECHWOOD ROAD AND PUMPED TO AN APPROPRIATE DOWNSTREAM LOCATION BEFORE DISCHARGING TO THE EXISTING CHANNEL.

EXISTING CATCH BASIN MAY BE USED TO INTERCEPT STREAM FLOW FOR DEWATERING OPERATIONS. PLUG OUTLET FROM CATCH BASIN INSTALL AND MAINTAIN PUMP TO CONVEY STREAM FLOW DOWNSTREAM

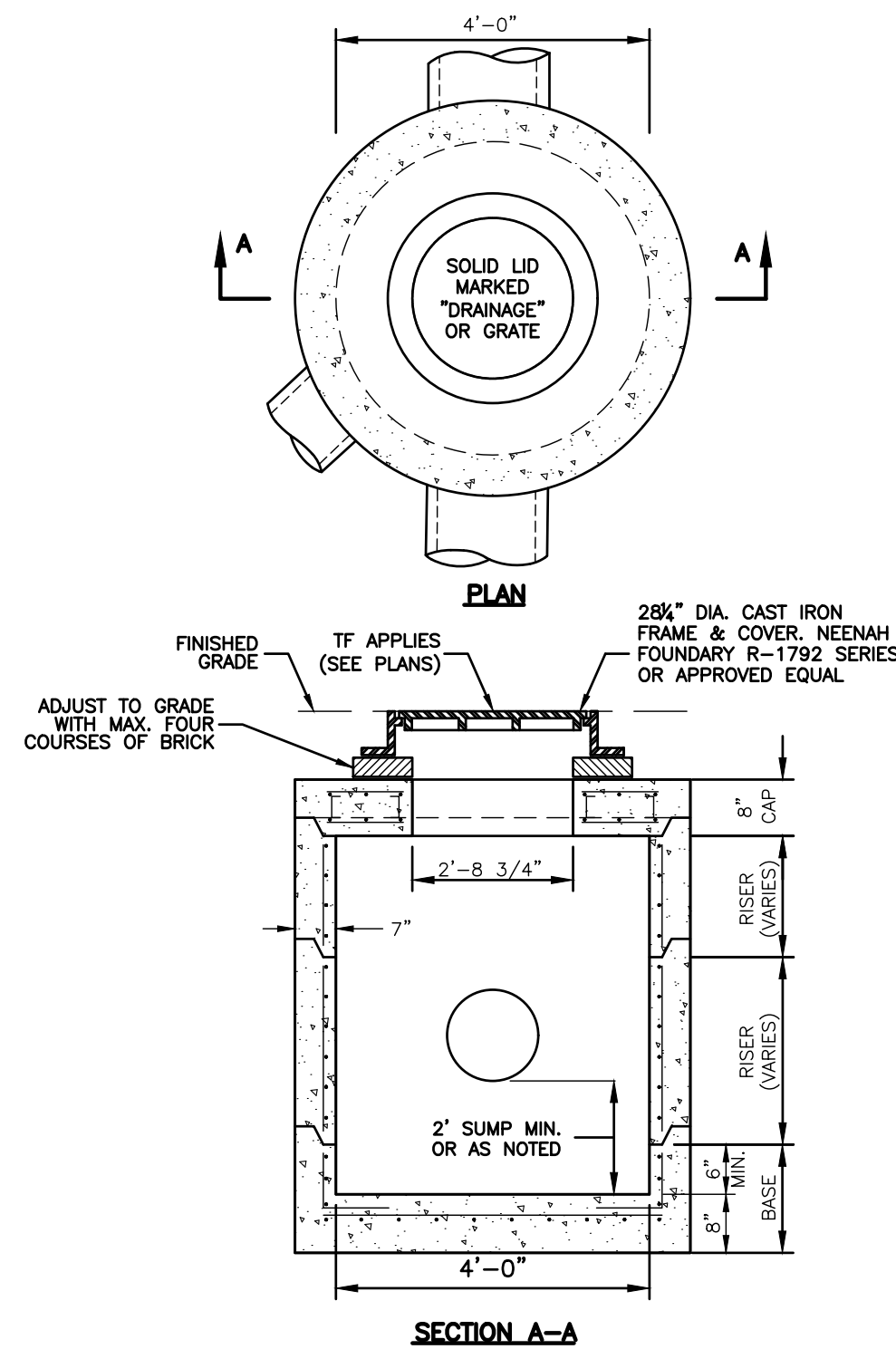


10' 0 10' 20'
SCALE: 1"=10'

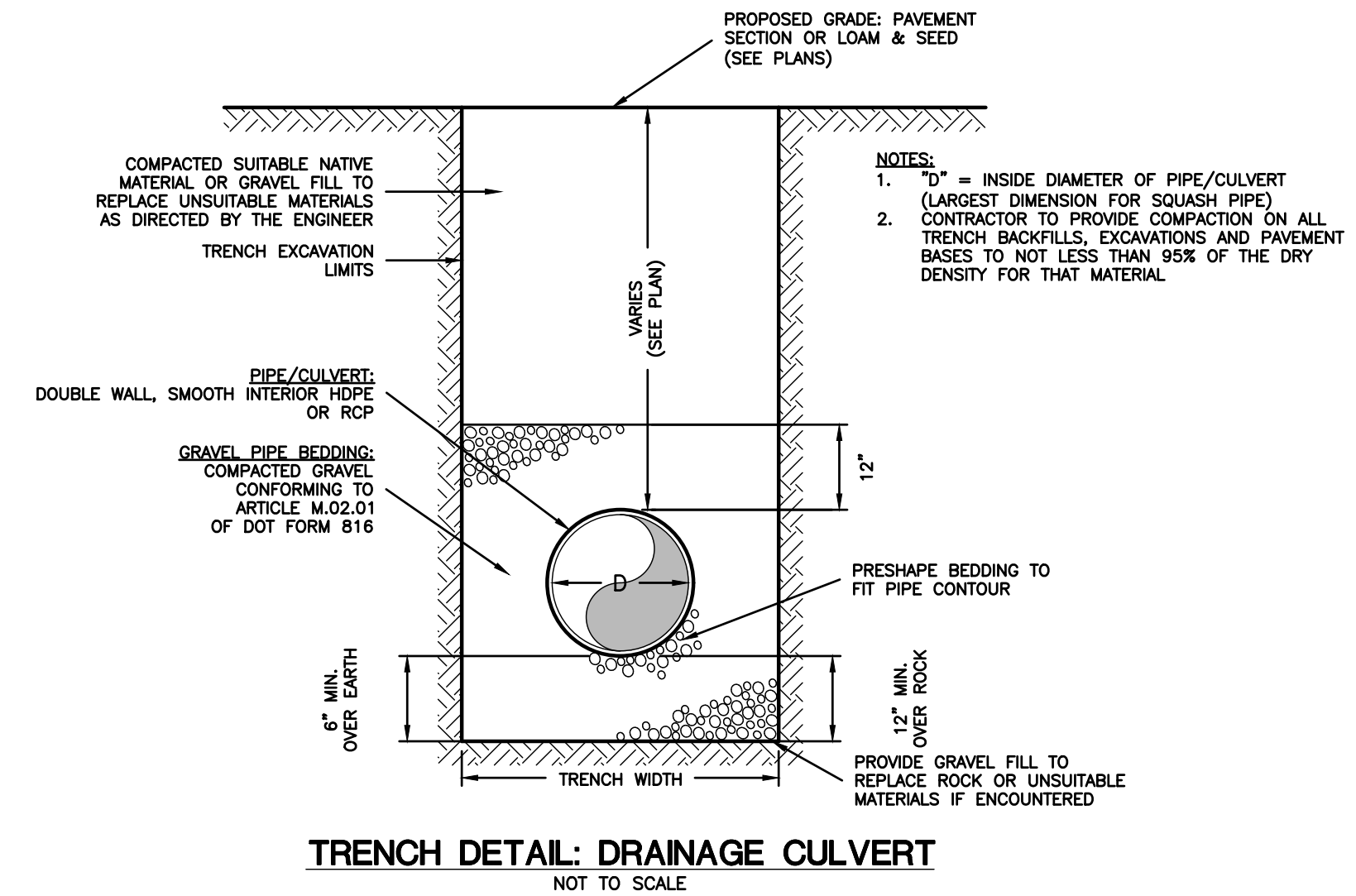
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CHANNEL BED RECONSTRUCTION - TYPICAL SECTION
(NOT TO SCALE)



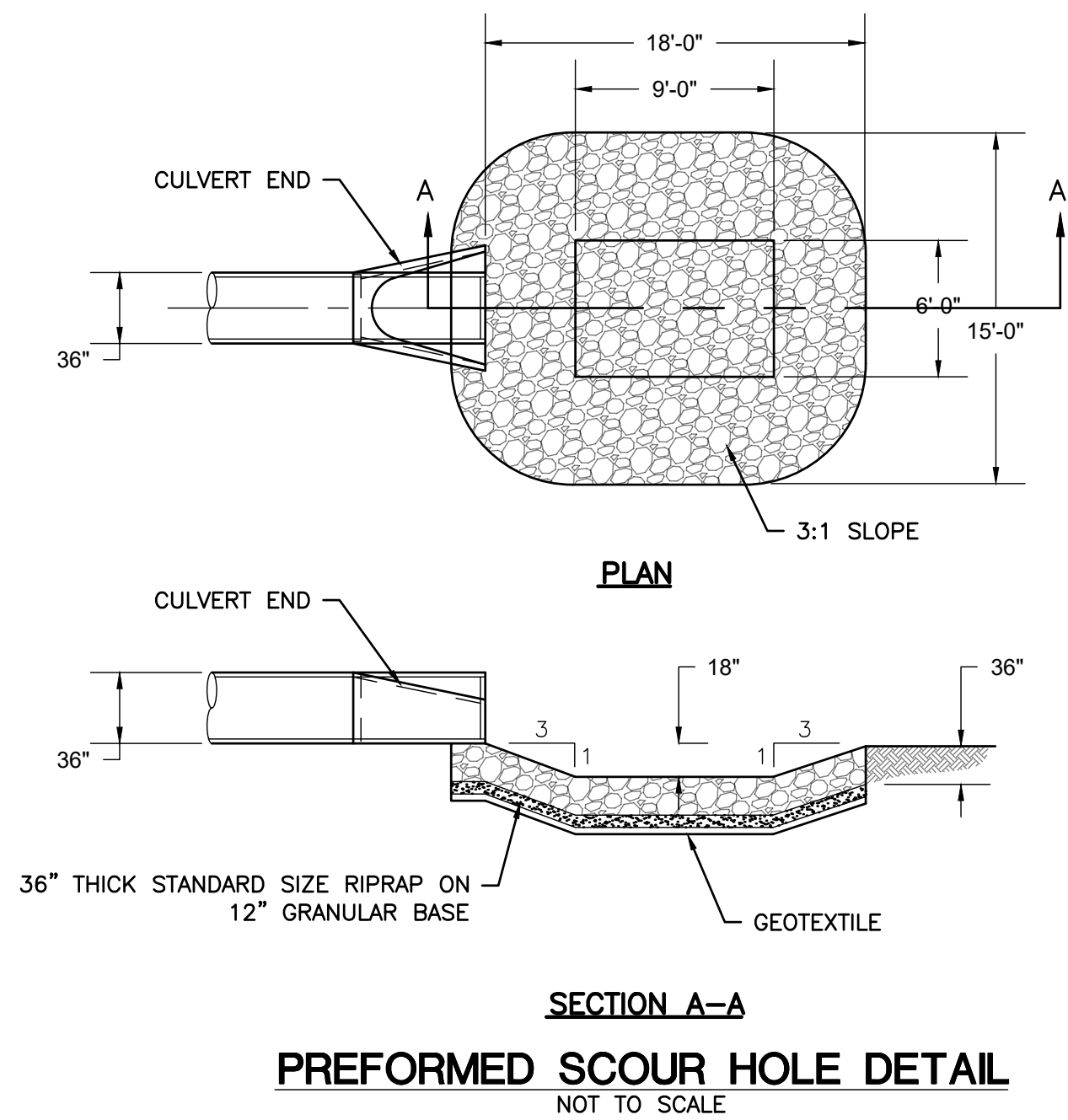
STANDARD DRAINAGE MANHOLE DETAIL
NOT TO SCALE



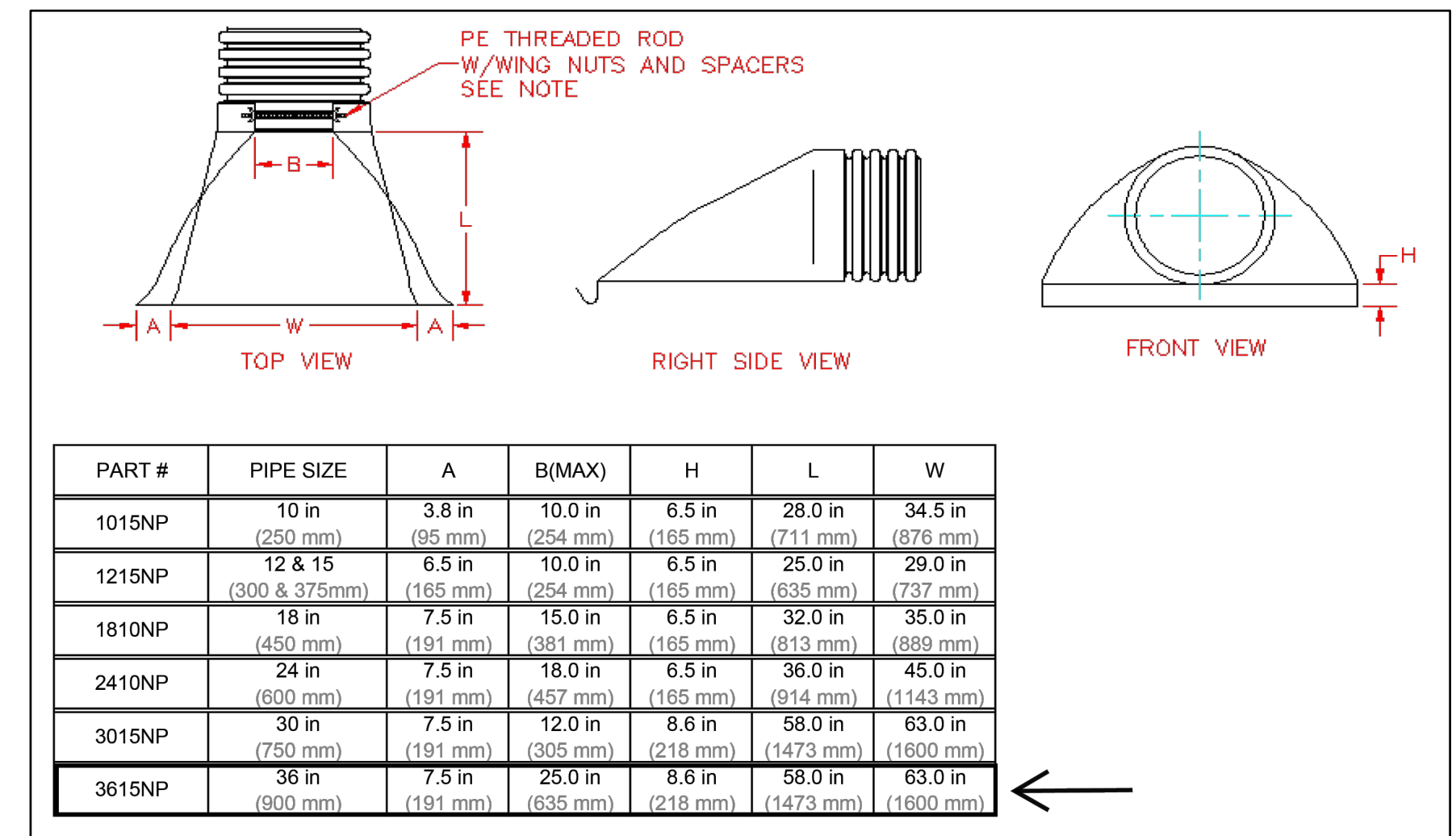
TRENCH DETAIL: DRAINAGE CULVERT
NOT TO SCALE

CHANNEL BED RECONSTRUCTION AND MATERIALS:

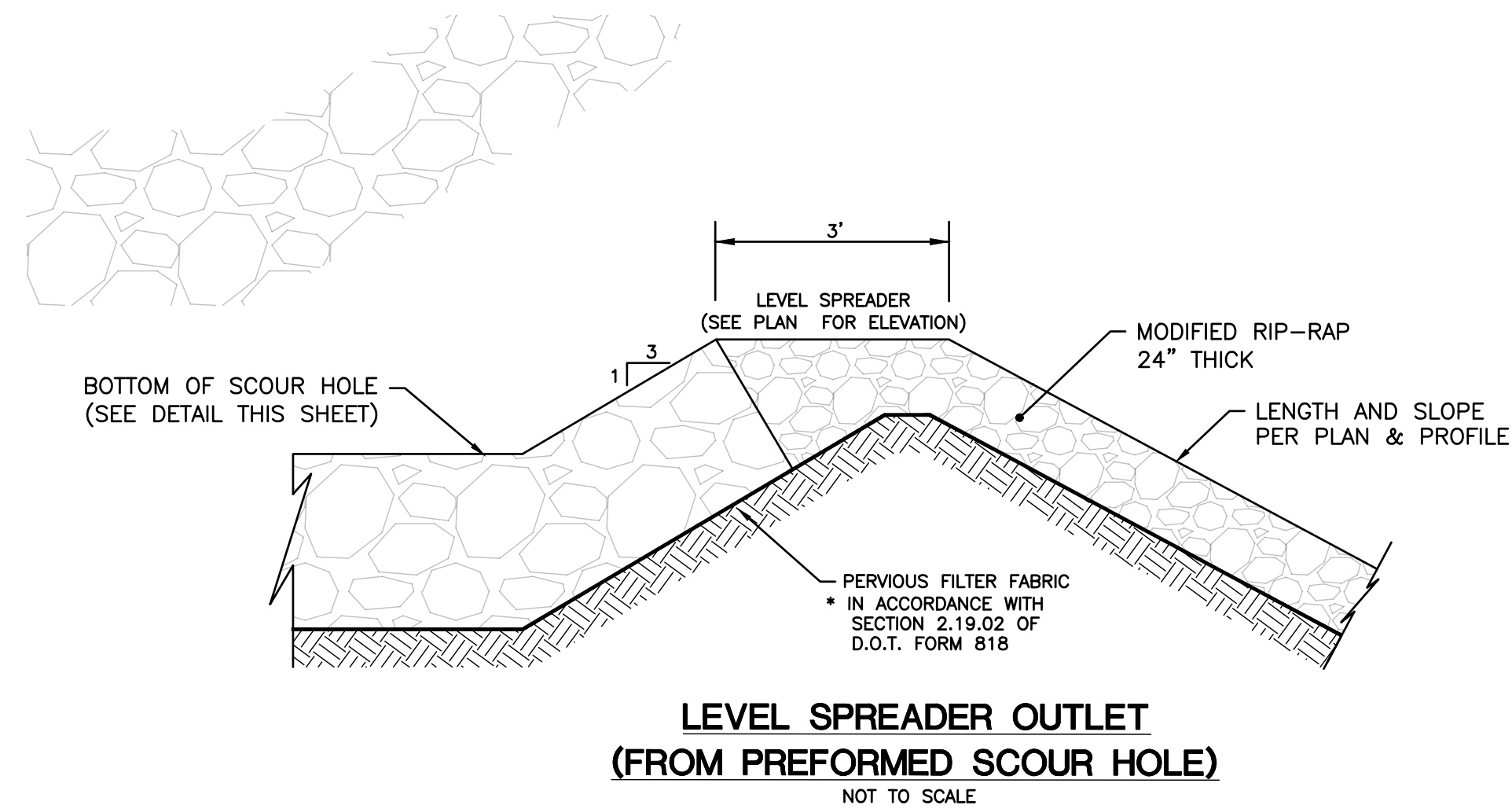
1. **REMOVAL OF EXISTING BED ARMORING:**
 - 1.1. REMOVE, STOCKPILE AND SEPARATE ALL EXISTING GRAVEL, COBBLE, AND BOULDER TO MINIMUM 12' DEPTH WITHIN EXISTING BANKFULL CHANNEL. REUSE MATERIAL ON TOP 12" OF FINAL CHANNEL BED.
2. **CHANNEL RESTORATION:**
 - 2.1. PERFORM ROUGH GRADING OF CHANNEL PER PLAN.
 - 2.2. DO NOT REUSE FINE-GRAINED SILTS, CLAYS, OR ORGANIC MATERIAL WITHIN THE BANKFULL CHANNEL.
 - 2.3. TO ESTABLISH NEW CHANNEL IN FILL SITUATION: FILL TO WITHIN 12" OF FINAL GRADE WITH NATURAL SAND AND GRAVEL/COBBLE/BOULDER RE-USED FROM ON-SITE EXCAVATION. DO NOT USE SILTS, CLAYS, OR ORGANICS. DO NOT USE STOCKPILED BED ARMORING AS GENERAL FILL TO RAISE BED. PLACE FINAL 12" OF MATERIAL FROM STOCKPILED MATERIAL, AND SUPPLEMENT WITH BED ARMORING AS DESCRIBED BELOW.
 - 2.4. TO ESTABLISH NEW CHANNEL IN CUT SITUATION, IN SUITABLE SOIL: PLACE FINAL 12" OF MATERIAL FROM STOCKPILED MATERIAL, AND SUPPLEMENT WITH BED ARMORING AS DESCRIBED BELOW.
 - 2.5. TO ESTABLISH NEW CHANNEL IN CUT SITUATION, IN UNSUITABLE SOIL: REMOVE MATERIAL TO 24" BELOW FINAL GRADE. PLACE 12" OF SUITABLE SAND/GRAVEL FILL. PLACE FINAL 12" OF MATERIAL FROM STOCKPILED MATERIAL, AND SUPPLEMENT WITH BED ARMORING AS DESCRIBED BELOW.
3. **LOW-FLOW CHANNEL:**
 - 3.1. SHALL BE SHAPED PER DETAIL.
4. **RANDOM BED ARMORING:**
 - 4.1. PLACE EXISTING STONES/BOULDERS, AT A RANDOM APPLICATION RATE (PLACEMENT TO BE COORDINATED WITH ENGINEER).



PREFORMED SCOUR HOLE DETAIL
NOT TO SCALE

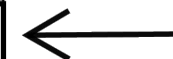


FLARED END SECTION
NOT TO SCALE

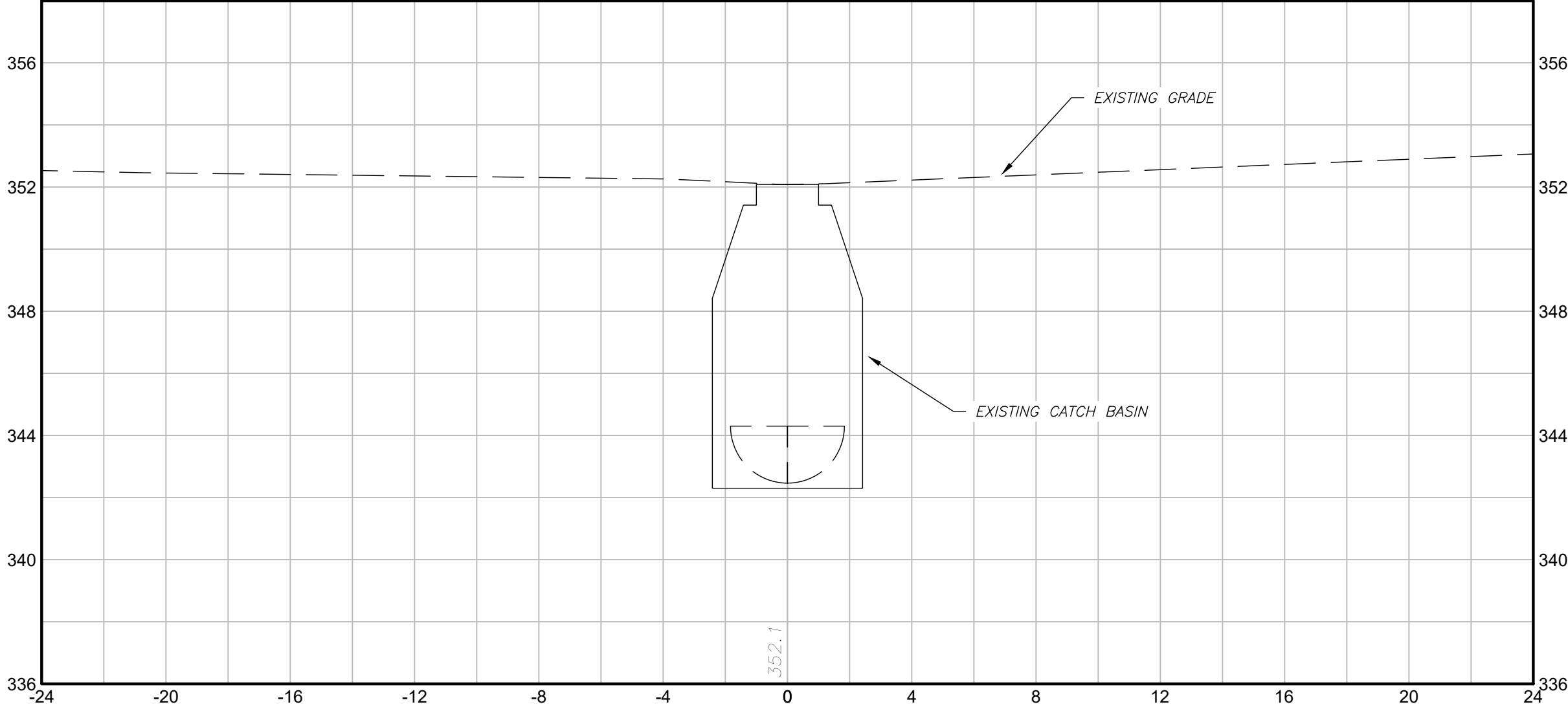


**LEVEL SPREADER OUTLET
(FROM PREFORMED SCOUR HOLE)**
NOT TO SCALE

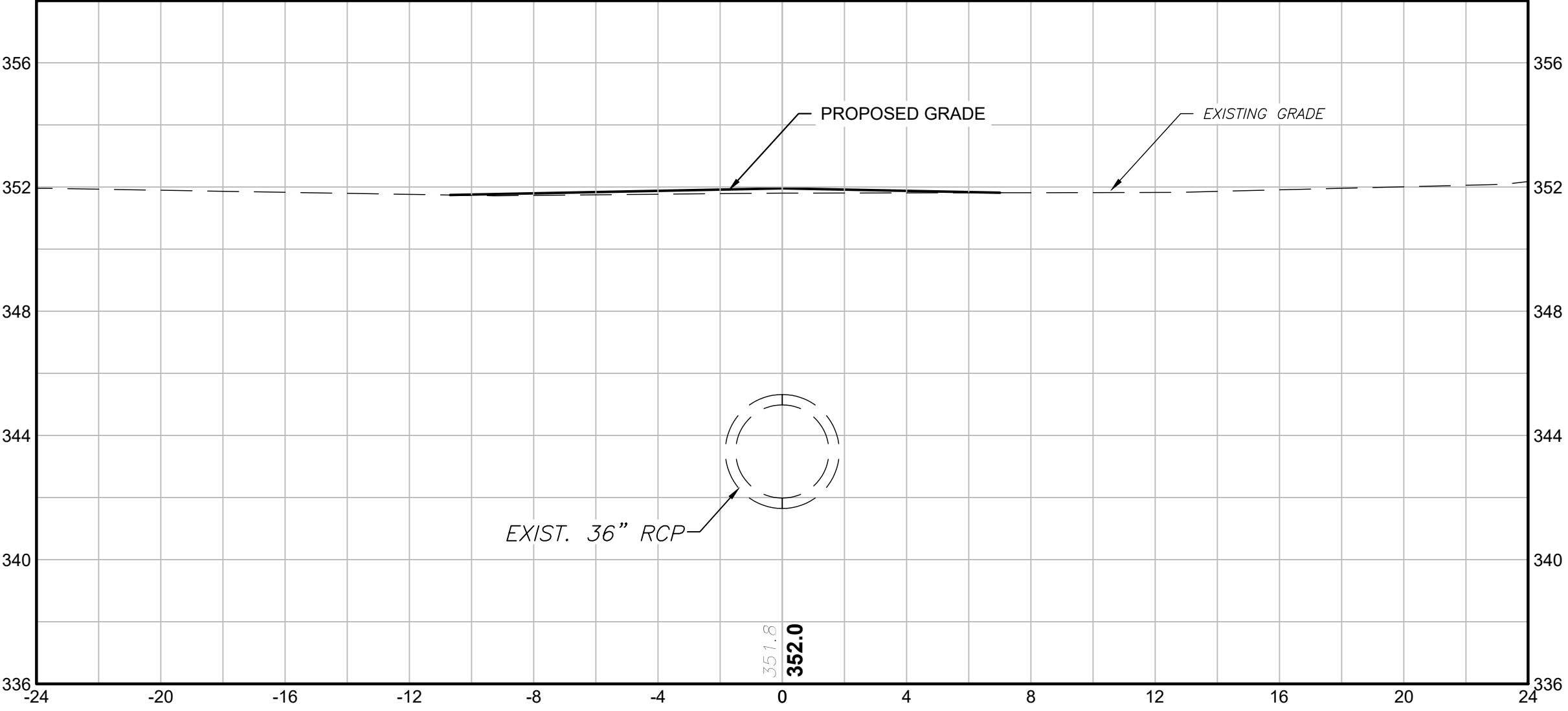
PART #	PIPE SIZE	A	B(MAX)	H	L	W
1015NP	10 in (250 mm)	3.8 in (95 mm)	10.0 in (254 mm)	6.5 in (165 mm)	28.0 in (711 mm)	34.5 in (876 mm)
1215NP	12 & 15 (300 & 375 mm)	6.5 in (165 mm)	10.0 in (254 mm)	6.5 in (165 mm)	25.0 in (635 mm)	29.0 in (737 mm)
1810NP	18 in (450 mm)	7.5 in (191 mm)	15.0 in (381 mm)	6.5 in (165 mm)	32.0 in (813 mm)	35.0 in (889 mm)
2410NP	24 in (600 mm)	7.5 in (191 mm)	18.0 in (457 mm)	6.5 in (165 mm)	36.0 in (914 mm)	45.0 in (1143 mm)
3015NP	30 in (750 mm)	7.5 in (191 mm)	12.0 in (305 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)
3615NP	36 in (900 mm)	7.5 in (191 mm)	25.0 in (635 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)



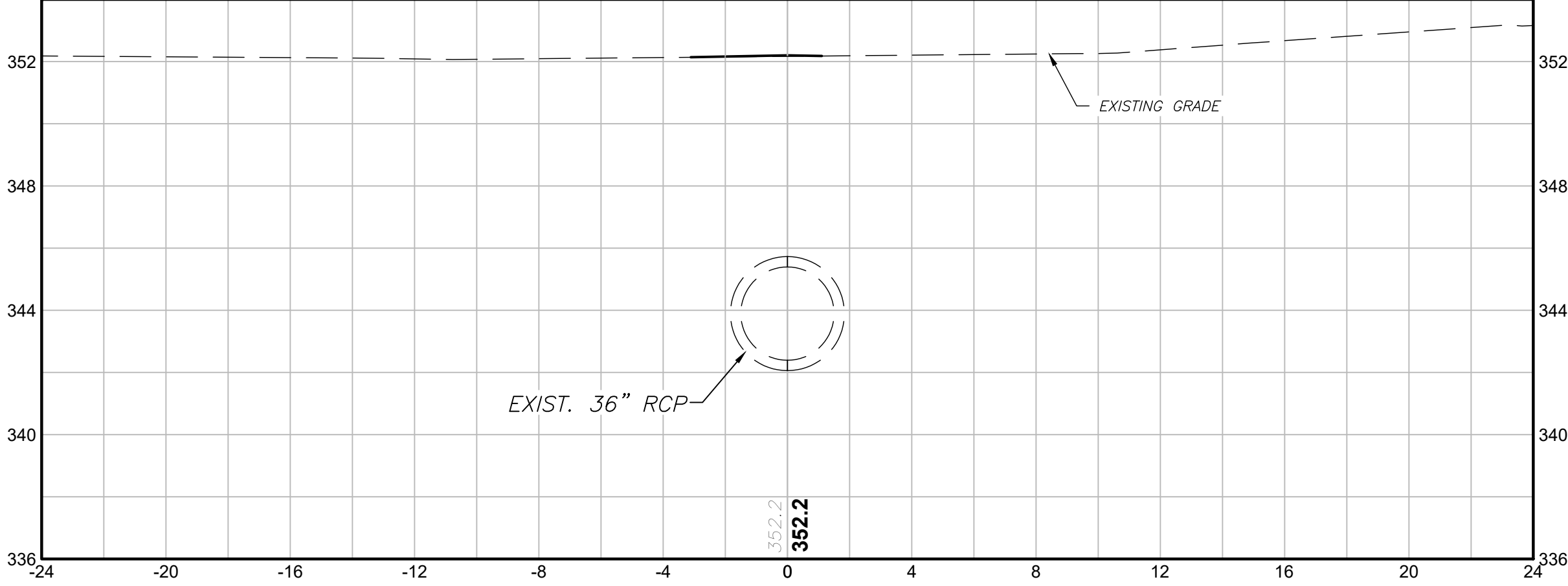
Construction Baseline - 0+00



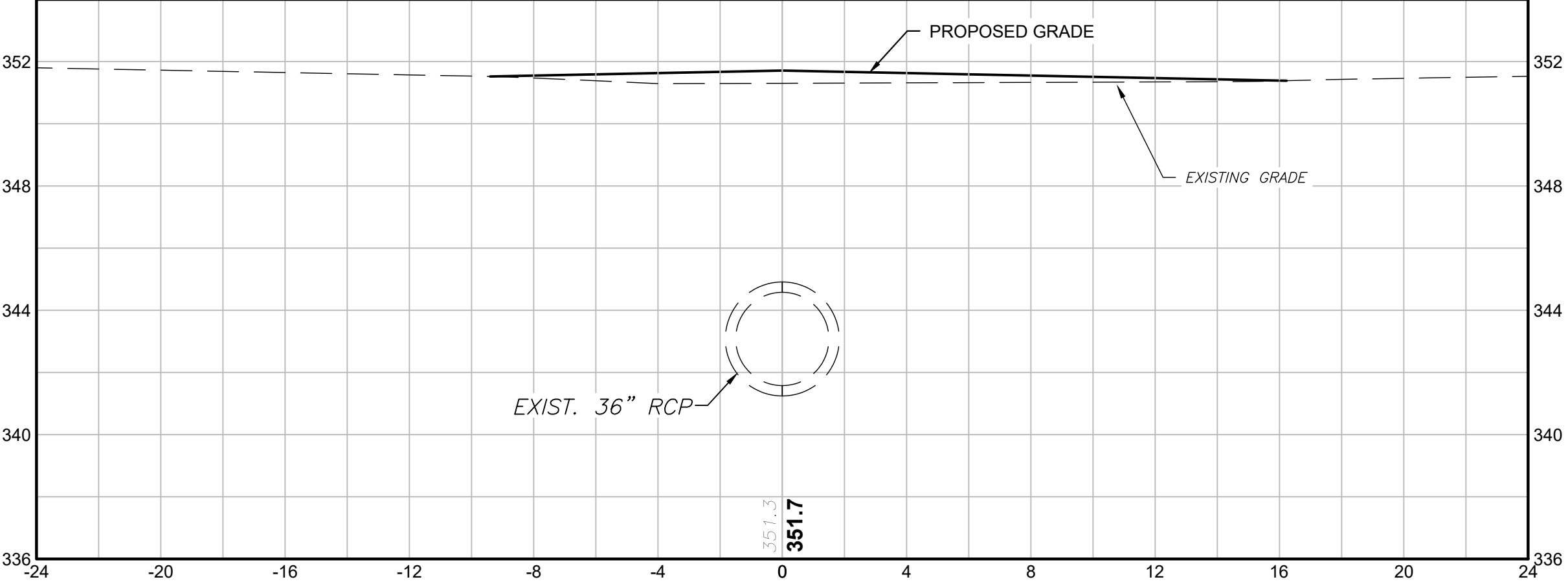
Construction Baseline - 0+20



Construction Baseline - 0+10

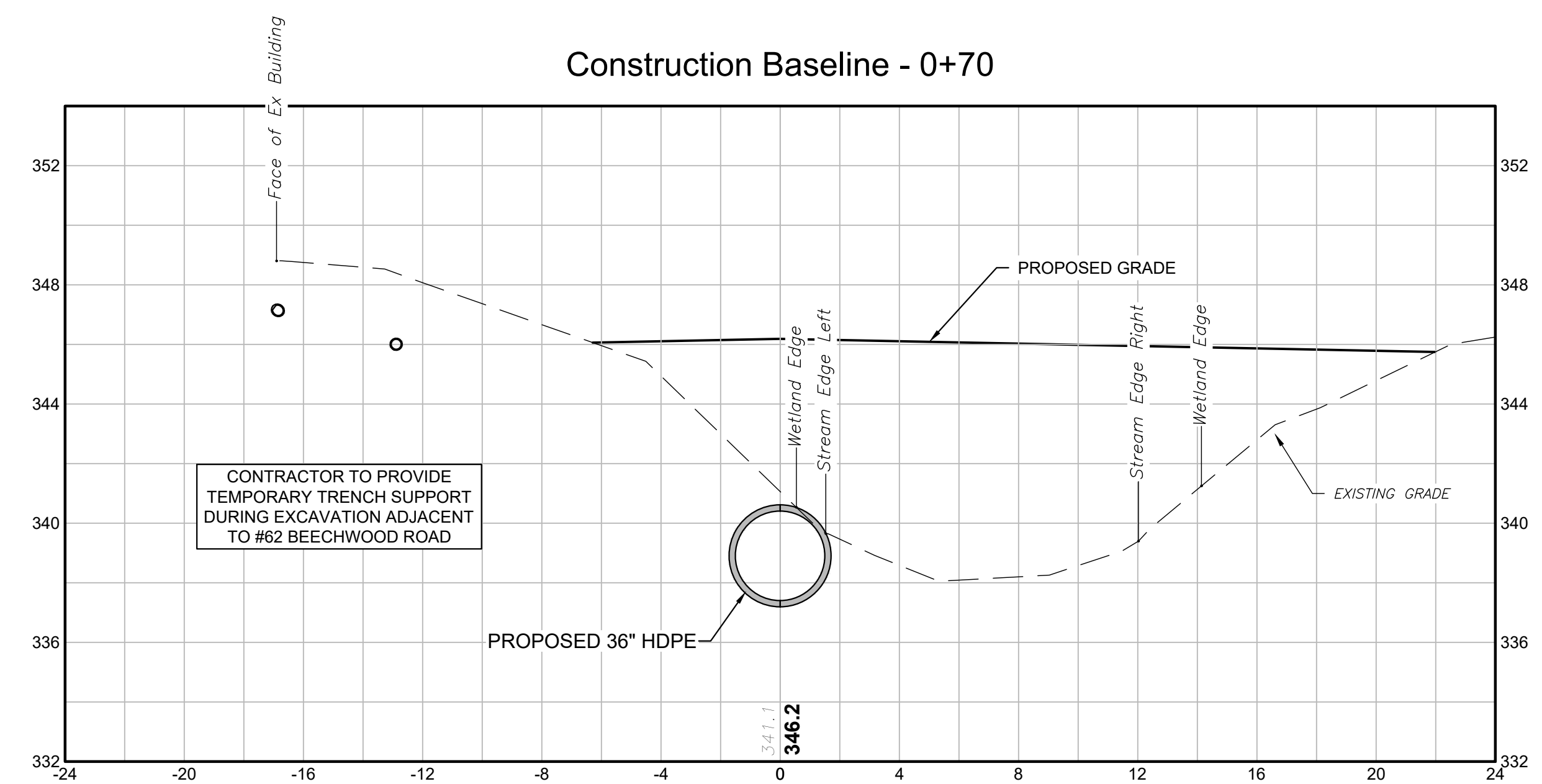
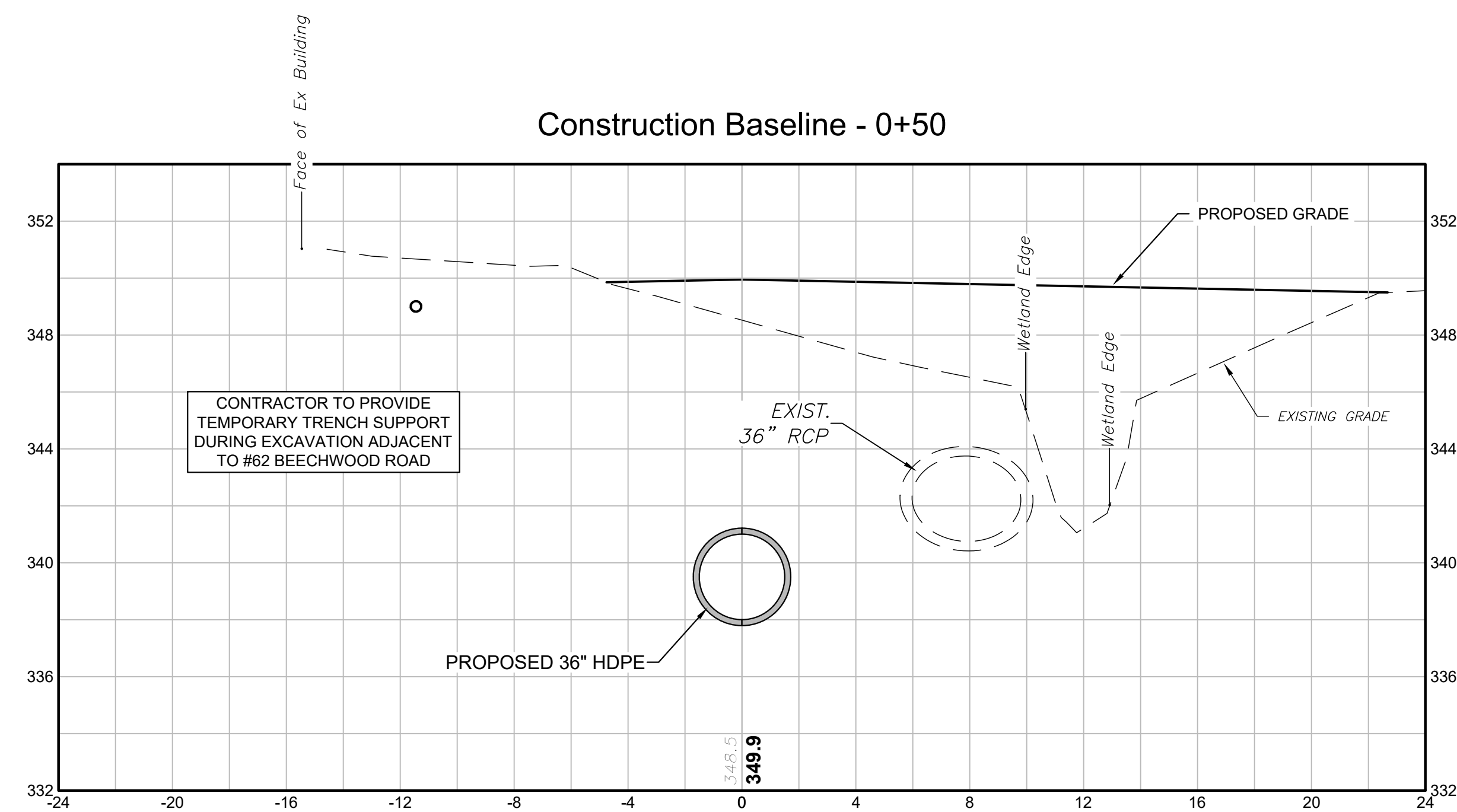
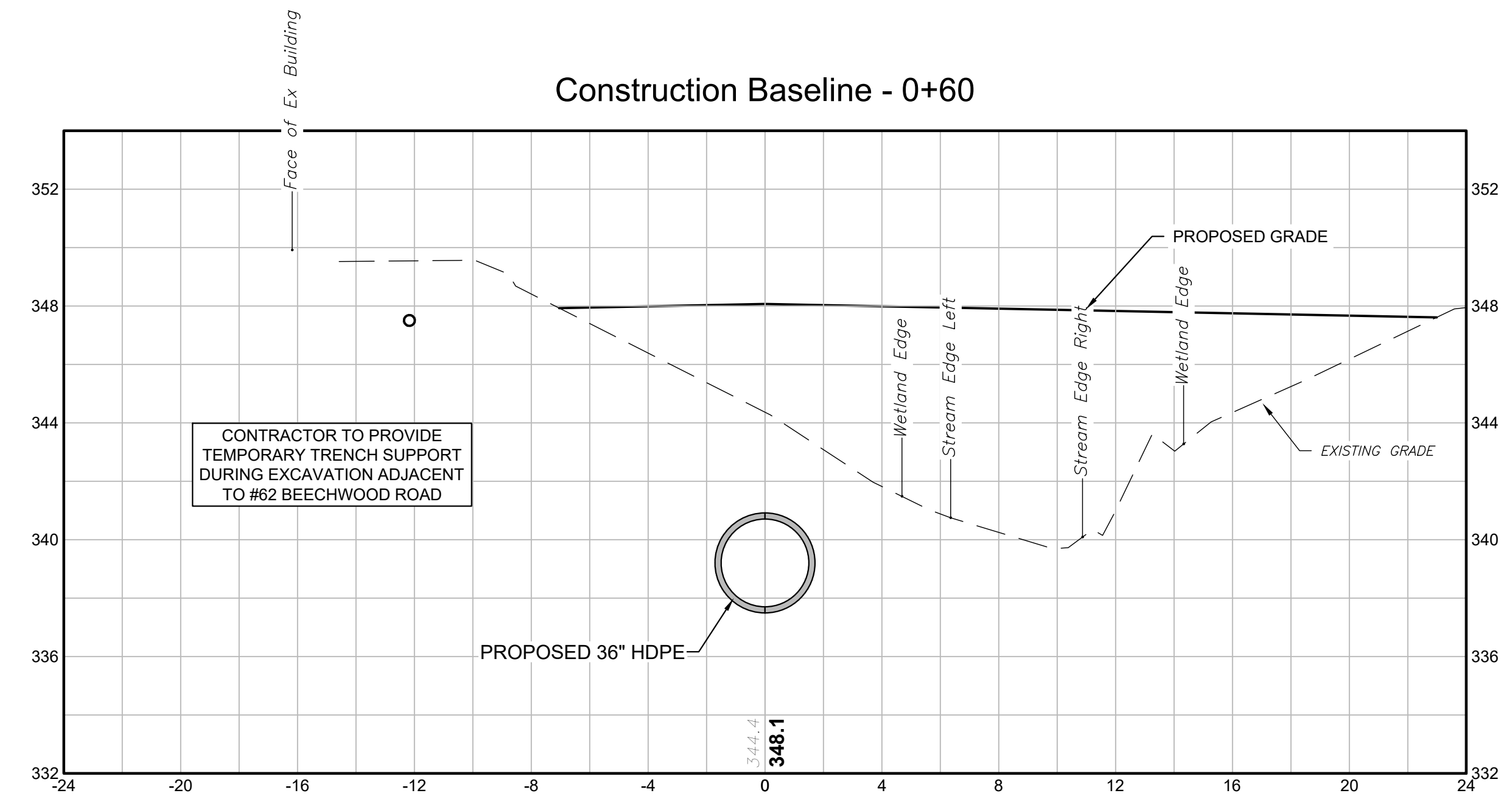
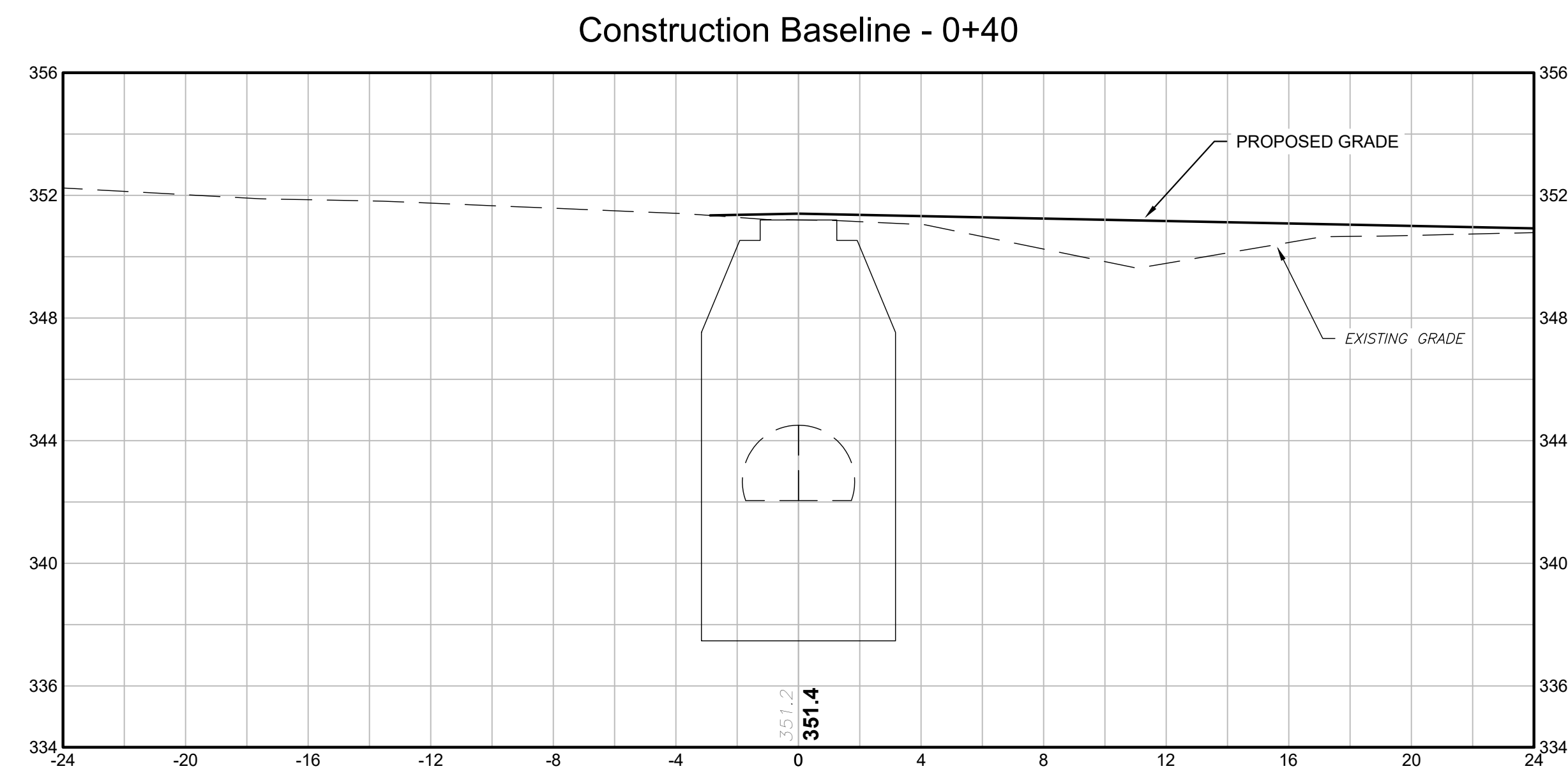


Construction Baseline - 0+30



SCALE:
HORIZ. = 1" = 4'
VERT. = 1" = 4'

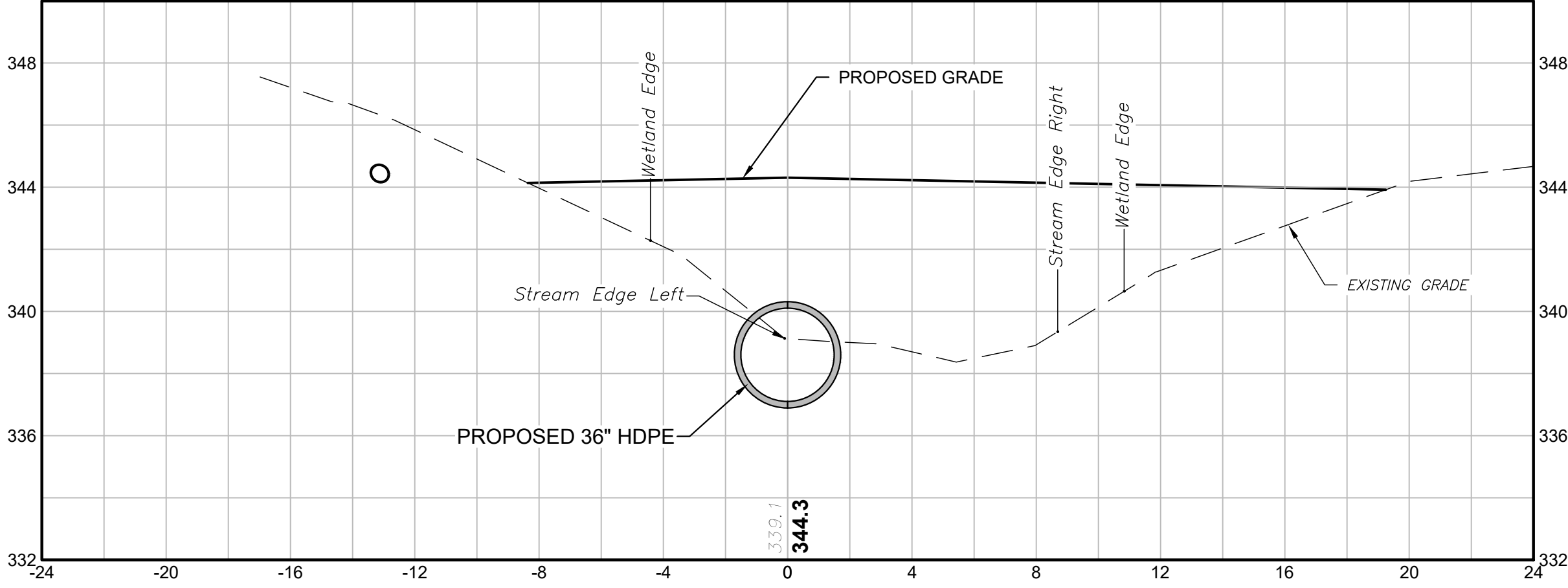
			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION		Project No. CLA-6767J
			TOWN OF MONTVILLE	Proj. Engineer D.P.H.
			BEECHWOOD ROAD CULVERT REPLACEMENT	Date: 06/05/25
			CROSS SECTIONS 1	Sheet No. 6



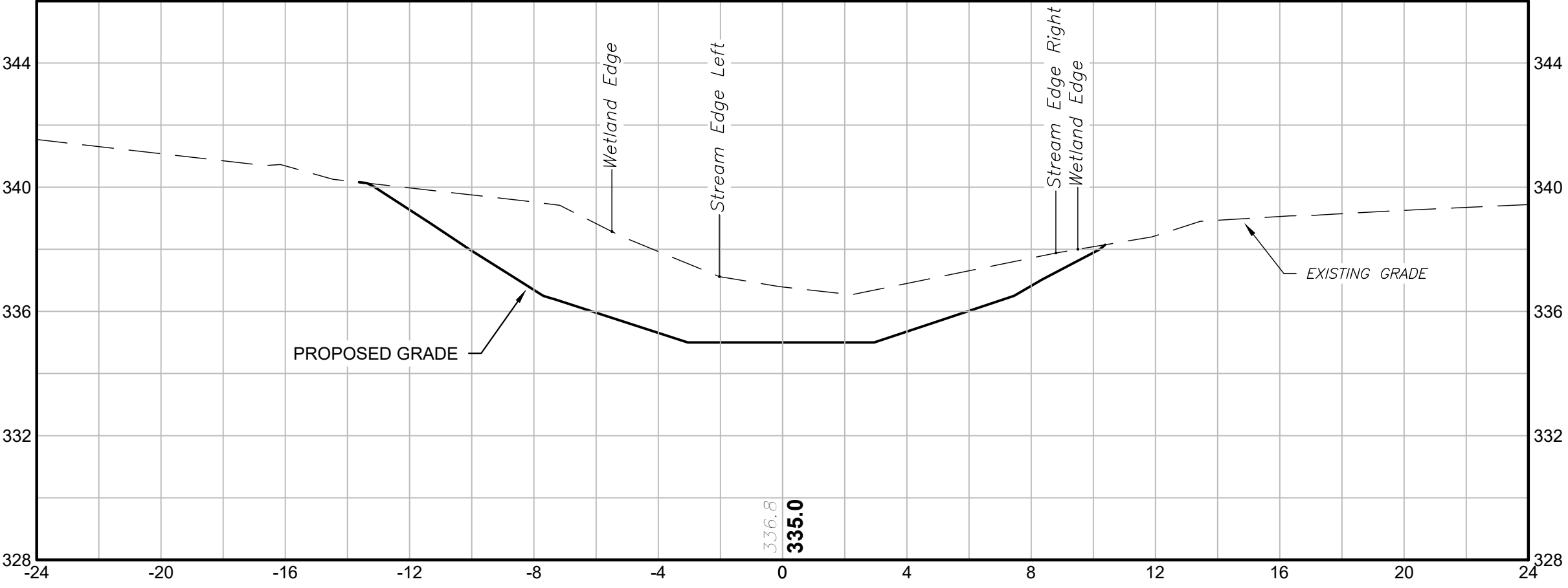
SCALE:
HORIZ. = 1" = 4'
VERT. = 1" = 4'

			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION		
			TOWN OF MONTVILLE	
			BEECHWOOD ROAD CULVERT REPLACEMENT	
			CROSS SECTIONS 2	
			Project No. CLA-6767J	7
			Proj. Engineer D.P.H.	
			Date: 06/05/25	
			Sheet No.	

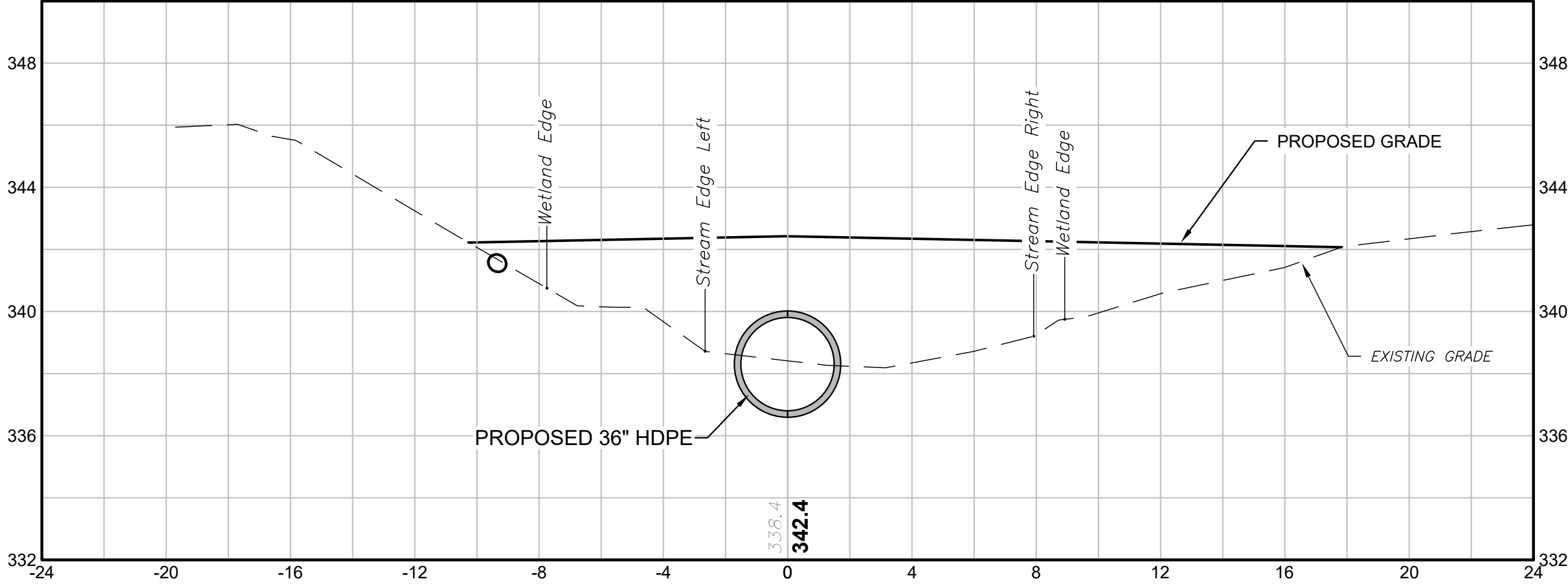
Construction Baseline - 0+80



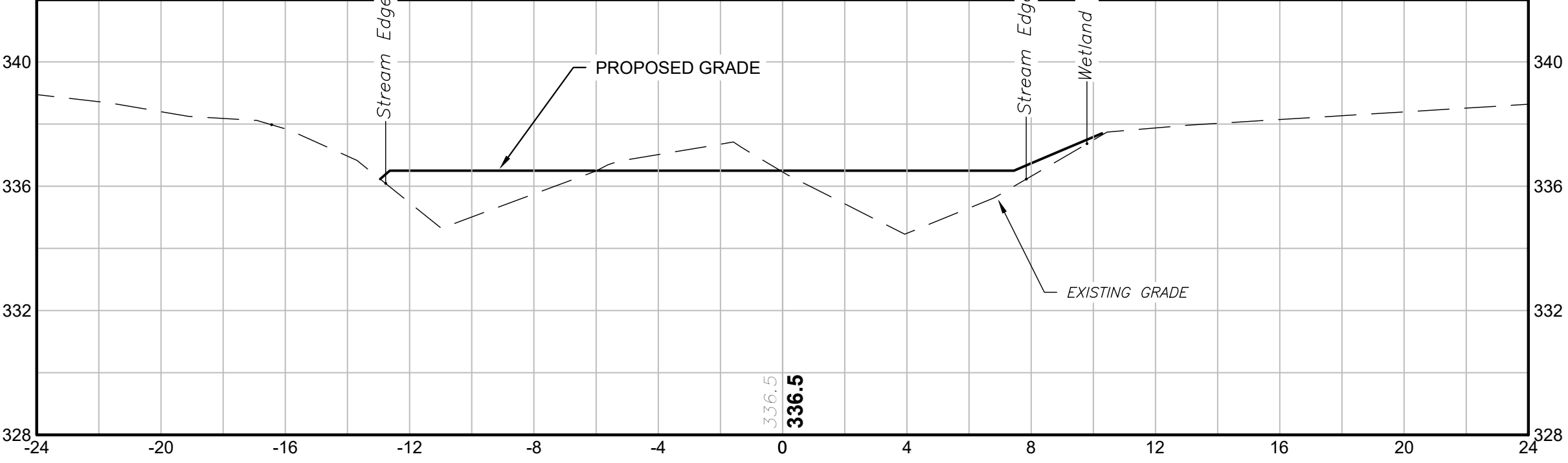
Construction Baseline - 1+10



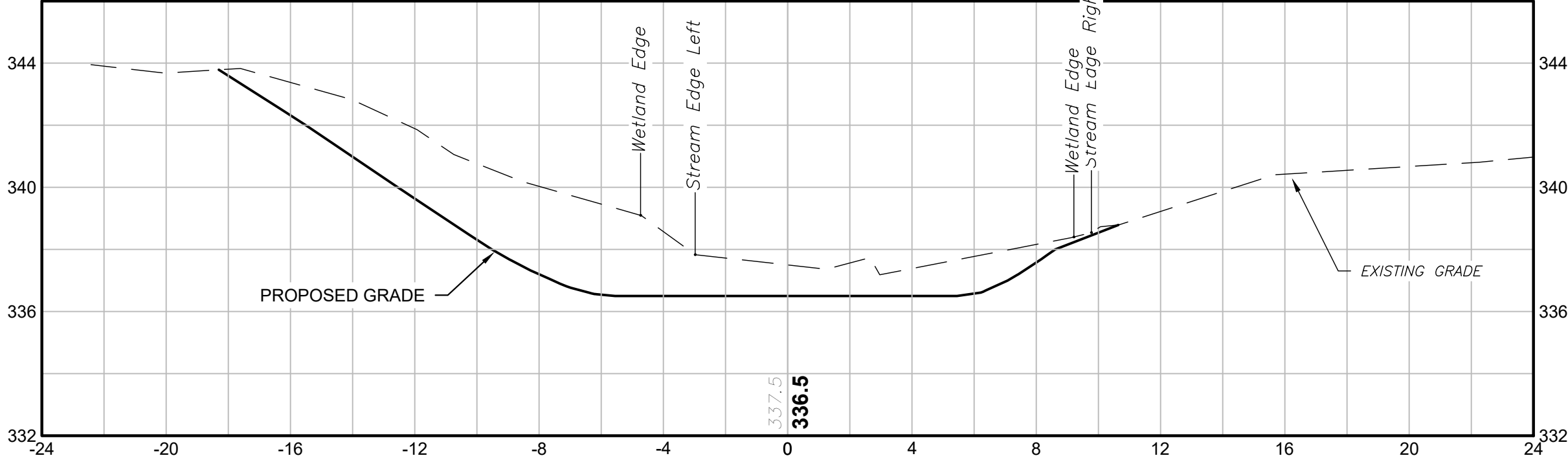
Construction Baseline - 0+90



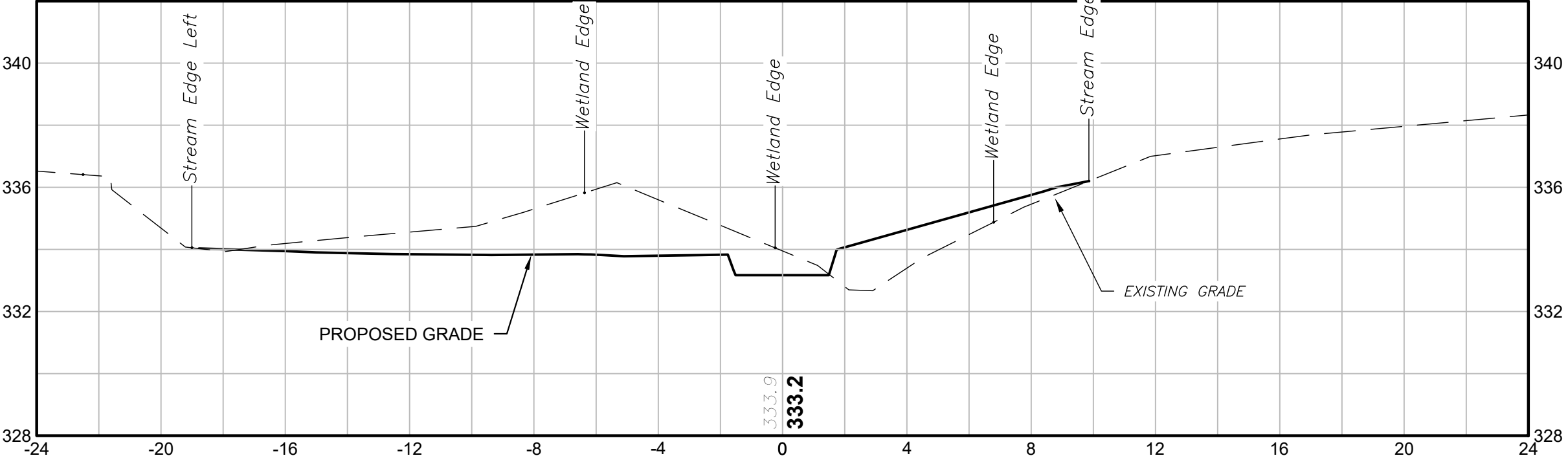
Construction Baseline - 1+20



Construction Baseline - 1+00



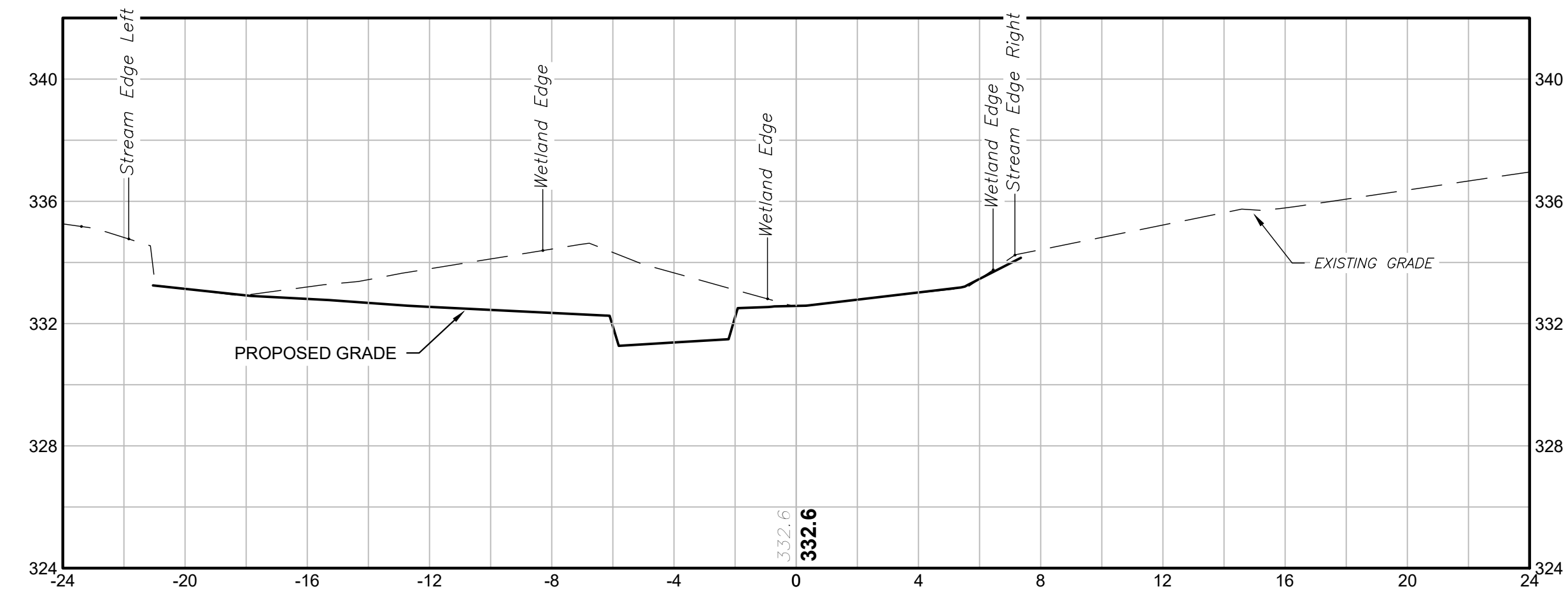
Construction Baseline - 1+30



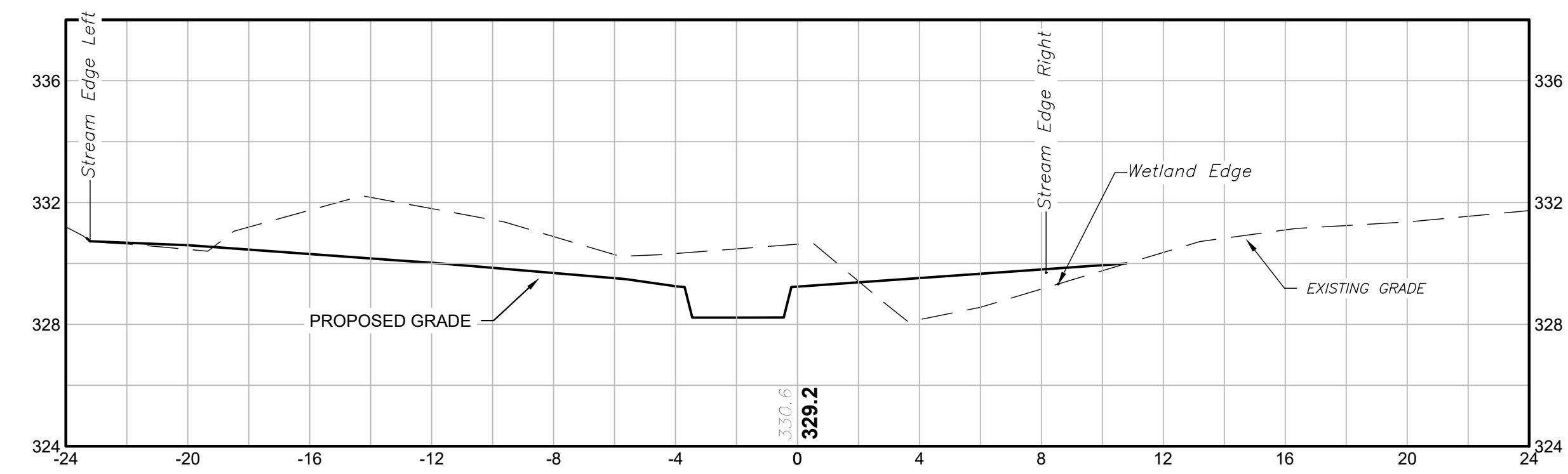
SCALE:
HORIZ. = 1" = 4'
VERT. = 1" = 4'

			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION		
			TOWN OF MONTVILLE	
			BEECHWOOD ROAD CULVERT REPLACEMENT	
			CROSS SECTIONS 3	
			Project No. CLA-6767J	
			Proj. Engineer D.P.H.	
			Date: 06/05/25	
			Sheet No.	8

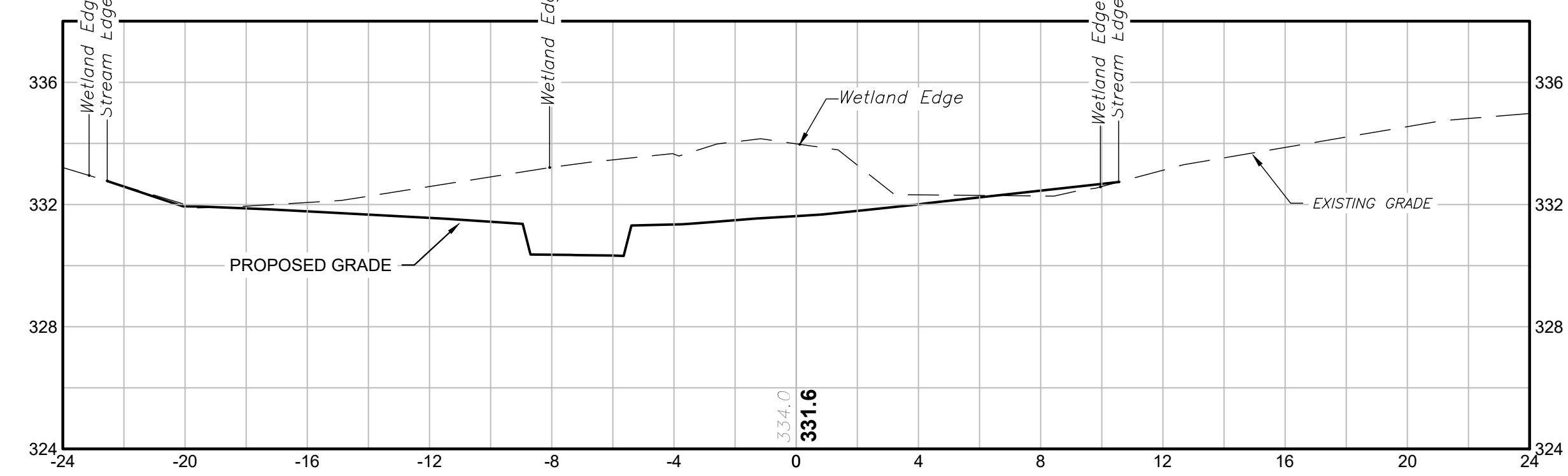
Construction Baseline - 1+40



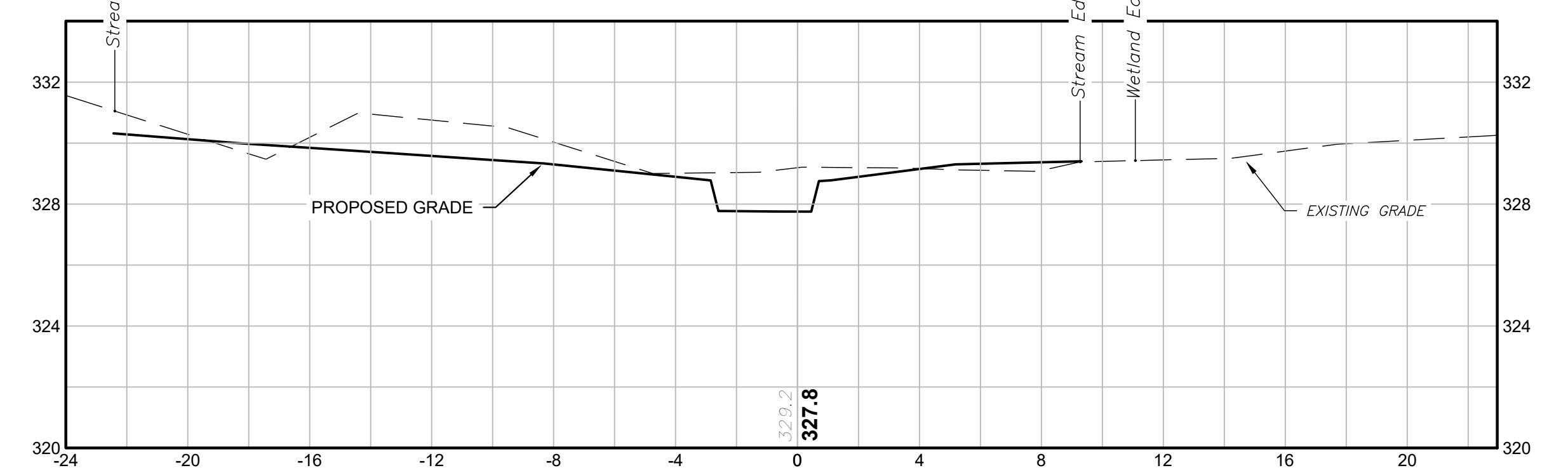
Construction Baseline - 1+70



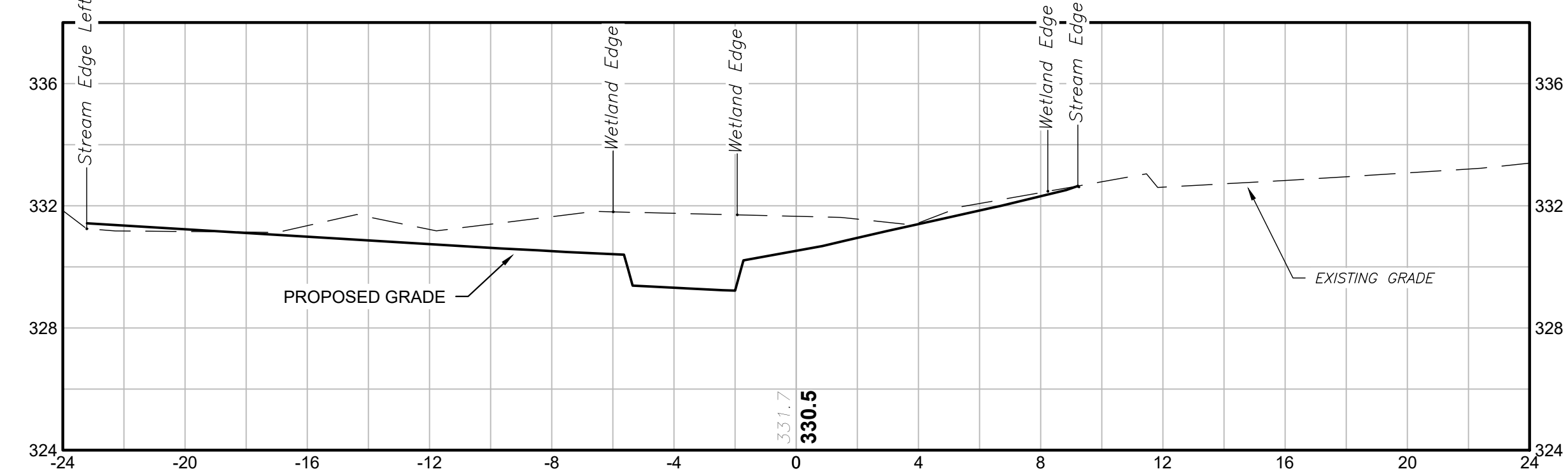
Construction Baseline - 1+50



Construction Baseline - 1+80



Construction Baseline - 1+60



SCALE:
HORIZ. = 1" = 4'
VERT. = 1" = 4'

			CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING	
			317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION		Project No. CLA-6767J
			TOWN OF MONTVILLE	Proj. Engineer D.P.H.
			BEECHWOOD ROAD CULVERT REPLACEMENT	Date: 06/05/25
			CROSS SECTIONS 4	Sheet No. 9