



CONSTRUCTION DRAWINGS FOR

TOWN OF ENFIELD

NH ROUTE 4A SEWER EXTENSION PROJECT

LAKEVIEW CONDOMINIUM AND

SHAKER LANDING SEWER CONNECTION

ENFIELD, NEW HAMPSHIRE

GRAFTON COUNTY

NHDES CWSRF PROJECT NUMBER: CS-330167-04

USDA RURAL DEVELOPMENT

MARCH 1, 2017

TOWN OF ENFIELD:

BOARD OF SELECTMAN:

JOHN W. KLUGE
B. FRED CUMMINGS
MEREDITH C. SMITH

TOWN MANAGER:

STEVE SCHNEIDER
ALISA BONNETTE

DEPARTMENT OF PUBLIC WORKS DIRECTOR: JIM TAYLOR

LAKEVIEW CONDOMINIUMS HOMEOWNER'S ASSOCIATION BOARD OF DIRECTORS:

KEVIN DEL MASTRO, PRESIDENT
BEAU MAVILLE
JOHN PELLERIN

SHAKER LANDING HOMEOWNER'S ASSOCIATION BOARD OF DIRECTORS:

JORDAN ORR, PRESIDENT
BEVERLY SLETTON
WALTER WYLAND
SUSAN BROADHURSTBOB CHORNEY

APPLICANT:

TOWN OF ENFIELD
DEPARTMENT
OF PUBLIC WORKS
74 LOCKEHAVEN ROAD
ENFIELD, NEW HAMPSHIRE 03748
603-632-4605

OWNER OF RECORD:

LAKEVIEW CONDOMINIUMS
HOMEOWNER'S ASSOCIATION
PROPERTY MANAGEMENT COMPANY:
TPW MANAGEMENT CO.
P.O. BOX 1051, NORWICH, VERMONT 05055
2458 CHRISTIAN ST, WHITE RIVER JCT, VT 05001
802-698-8668

OWNER OF RECORD:

SHAKER LANDING
HOMEOWNER'S ASSOCIATION
PROPERTY MANAGEMENT COMPANY:
MOSELEY ASSOCIATES, LTD.
P.O. BOX 706
48 STAGECOACH ROAD, WHITE RIVER JCT, VT 05001
802-296-2600

ELECTRICAL ENGINEER:

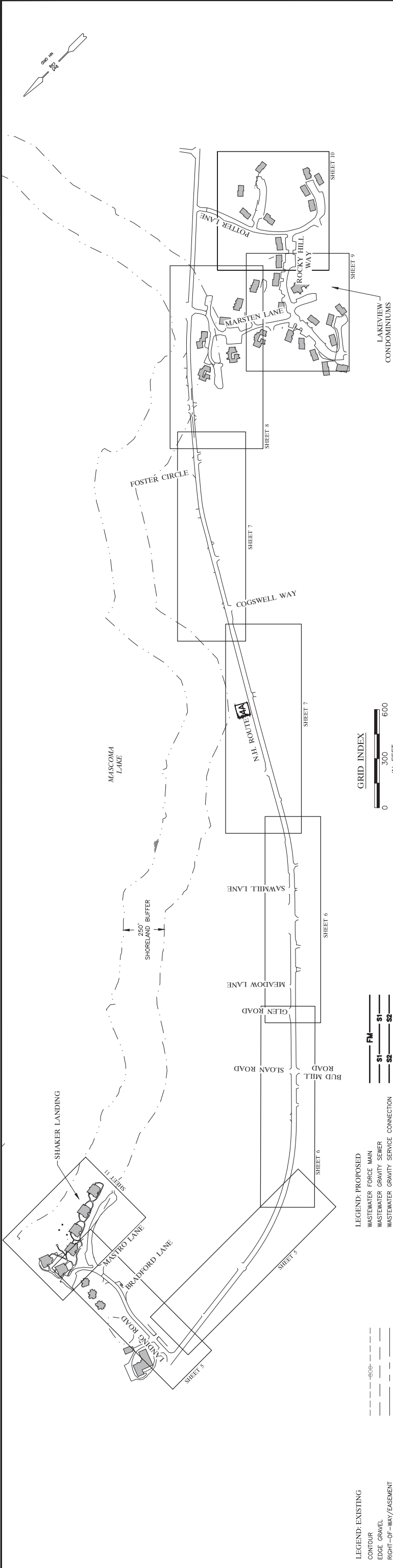
LEE CARROLL ELECTRICAL
CONSULTANTS
P.O. BOX 357
1 MADISON AVE, GORHAM, NEW HAMPSHIRE 03581
(603) 466-5065

CIVIL ENGINEER/SURVEYOR:

PATHWAYS CONSULTING, LLC
240 MECHANIC STREET
SUITE 100 LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200



PATHWAYS CONSULTING PROJECT NO. 10068-05



LEGEND: EXISTING

- CONTOUR
- EDGE GRAVEL
- RIGHT-OF-WAY/EASEMENT
- STONE WALL
- GUARDRAIL
- DRAINAGE PIPE
- FLOW DIRECTION
- DRAINAGE MANHOLE
- CATCH BASIN
- WASTEWATER PIPE-GRAVITY
- WASTEWATER PIPE-FORCEMAIN
- SANITARY MANHOLE
- WASTEWATER MANHOLE
- WASTEWATER VENT
- CLEAN-OUT
- WATERLINE (APPROX.)
- HYDRANT
- WATER VALVE
- WATER STOP VALVE
- UNDERGROUND ELECTRICAL
- UNDERGROUND COMMUNICATIONS
- TRANSFORMER
- ELECTRIC POST
- ELECTRIC BOX
- GROUND LIGHT/LIGHT POLE
- ELECTRIC METER
- UTILITY POLE
- TELEPHONE PEDESTOOL
- CABLE TV BOX
- GAS METER
- TREELINE

LEGEND: PROPOSED

- WASTEWATER FORCE MAIN
- WASTEWATER GRAVITY SEWER
- WASTEWATER GRAVITY SERVICE CONNECTION
- WASTEWATER GRAVITY SEWER MANHOLE
- WASTEWATER FORCEMAIN MANHOLE
- WASTEWATER TWO-WAY FORCEMAIN CLEANOUT MANHOLE
- WASTEWATER FORCEMAIN AIR RELEASE VALVE MANHOLE
- WASTEWATER FORCEMAIN PUMP STATION
- WASTEWATER SEWER SERVICE CLEANOUT
- WATERLINE
- DIRECTIONAL DRILL PIT (N.T.S.)
- PROPOSED WORK
- INVESTIGATION SOIL BORING
- TEST PIT - AUGER REFUSAL
- TEST PIT - START OF WATER
- PROPOSED GRADE
- LEGEND: PROPOSED ELECTRICAL
- UNDERGROUND UTILITY PRIMARY POWER
- UNDERGROUND SECONDARY POWER/CONTROLS
- UNDERGROUND TELEPHONE SERVICE
- LED LIGHT FIXTURE: LETTER INDICATES TYPE
- EMERGENCY LIGHT FIXTURE: LETTER INDICATES TYPE
- DUPLEX RECEPTACLE: 36" AFF
- SIMPLEX RECEPTACLE: 36" AFF;
- "C" INDICATES CORROSION RESISTANT
- SINGLE POLE SWITCH: 48" AFF
- DISCONNECT OR ENCLOSED C/B
- CONNECTION TO FIXED EQUIPMENT
- TEMPERATURE: "A" INDICATES LOW TEMPERATURE
- ALARM: "E" INDICATES FAN CONT
- MOTOR
- UTILITY METER
- HAND-OFF AUTO SWITCH
- ABOVE FINISHED FLOOR
- ABOVE GRADE
- AUTOMATIC TRANSFER SWITCH
- CHEMICAL FEED PUMP
- GROUND FAULT CIRCUIT INTERRUPTER
- WATER PROOF
- ELECTRIC UNIT HEATER
- MOTOR OPERATED DAMPER
- MANUAL TRANSFER SWITCH
- PUMP CONTROL PANEL
- FLOW METER
- EXPLOSION PROOF SWITCH
- LEGEND: EROSION CONTROL
- SILT FENCE & EROSION CONTROL SOCK (DOUBLE ROW)
- SILT FENCE OR EROSION CONTROL SOCK (SINGLE ROW)
- EROSION CONTROL SOCK (SINGLE ROW)
- CHECK DAM
- BLOCK & STONE INLET SEDIMENT CONTROL
- SILTSACK-INLET FILTER BAG

GRID INDEX

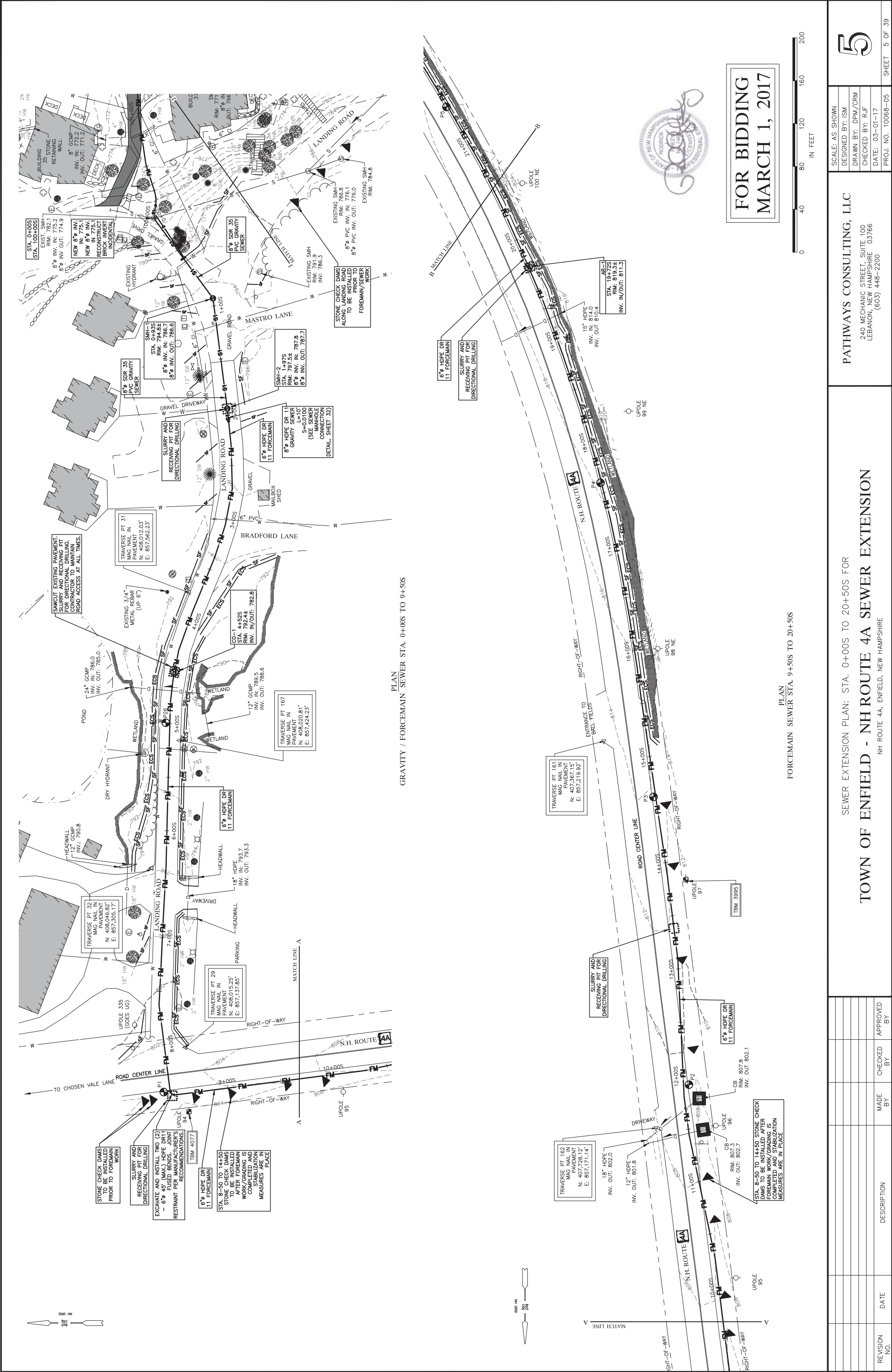


TEMPORARY BENCHMARK (TBM) DATA		
TBM NO.	TBM LOCATION	TBM ELEVATION
835	MAG NAIL IN TREE	776.84
840	X BOLT ON HYDRANT	771.34
1404	X BOLT ON HYDRANT	811.03
2432	MAG NAIL IN UPOLE	764.96
2550	MAG NAIL IN UPOLE	782.32
2754	MAG NAIL IN UPOLE	780.53
2992	MAG NAIL IN UPOLE	816.67
3167	MAG NAIL IN UPOLE	813.56
3470	MAG NAIL IN UPOLE	787.60
3515	MAG NAIL IN UPOLE	789.13
3755	MAG NAIL IN UPOLE	810.90
3995	MAG NAIL IN UPOLE	812.47
4077	MAG NAIL IN UPOLE	806.22



FOR BIDDING
MARCH 1, 2017

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION			PATHWAYS CONSULTING, LLC			4		
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE			240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200			SHEET 4 OF 39		
GRID INDEX PLAN, LEGEND, AND BENCH MARK TABLE FOR			SCALE: AS SHOWN			DESIGNED BY: ISM		
						DRAWN BY: DPM/CRM		
						CHECKED BY: RJF		
						DATE: 03-01-17		
						PROJ. NO. 10068-05		
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY			



SERVICE CONNECTION GENERAL NOTES:

- 1. CONTRACTOR TO COMPLETE EXPLORATORY EXCAVATION ON ALL SERVICE CONNECTIONS PRIOR TO ORDERING INTERCONNECTION SEWER MANHOLE STRUCTURES. INVERTS TO BE REVIEWED WITH ENGINEER PRIOR TO ORDERING.
- 2. DECOMMISSION GRAVITY WASTEWATER SYSTEMS IN ACCORDANCE WITH EXISTING WASTEWATER DECOMMISSIONING NOTES ON SHEET 3. D-BOXES NEED TO BE LOCATED BY CONTRACTOR.
- 3. INSTALL CLEANOUTS WITH CAST-IRON COVERS AT ALL SERVICE CONNECTIONS TO EXISTING PIPES AND EXTEND TO GRADE.
- 4. ALL SERVICE LINES MUST HAVE A MINIMUM OF FOUR (4) FEET OF COVER IN CROSS-COUNTRY LOCATIONS AND SIX (6) FEET OF COVER IN ROAD/DRIVEWAY AND/OR OTHER TRAVEL-WAY CROSSINGS. INSULATION REQUIRED WHERE THESE MINIMUM COVERS CANNOT BE ATTAINED. THESE LOCATIONS SHALL BE REVIEWED WITH ENGINEER.

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LAKEVIEW CONDOMINIUMS ON-SITE PLAN FOR

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

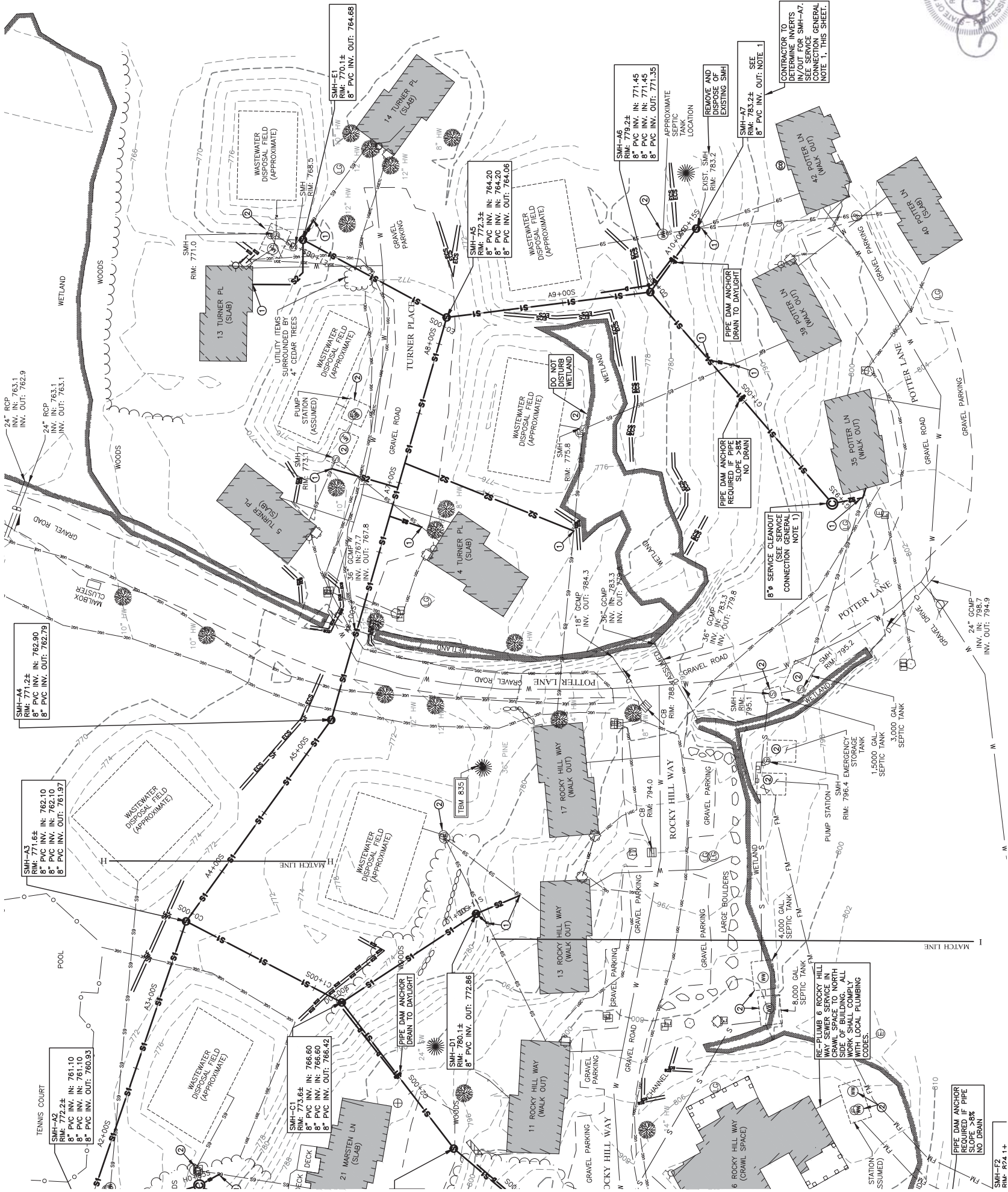
SCALE: AS SHOWN
DESIGNED BY: ISM
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DATE: 03-01-17
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PLAN
GRAVITY SEWER STA. C1+2IS TO C3+73S
GRAVITY SEWER STA. D0+00S TO D1+1IS
GRAVITY SEWER STA. F0+00S TO F1+93S

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PLAN
GRAVITY SEWER STA. A4+08S TO A10+15S
GRAVITY SEWER STA. E0+00S TO E1+13S
GRAVITY SEWER STA. G0+00S TO G1+93S

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MARCH 1, 2017



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- 2 DECOMMISSION GRAVITY WASTEWATER SYSTEMS IN ACCORDANCE WITH EXISTING WASTEWATER DECOMMISSIONING NOTES ON SHEET 3. D-BOXES NEED TO BE LOCATED BY CONTRACTOR.
- 3 INSTALL CLEANOUTS WITH CAST-IRON COVERS AT ALL SERVICE CONNECTIONS TO EXISTING PIPES AND EXTEND TO GRADE.
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PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

LAKEVIEW CONDOMINIUMS SITE PLAN FOR

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

SCALE: AS SHOWN

DESIGNED BY: ISM

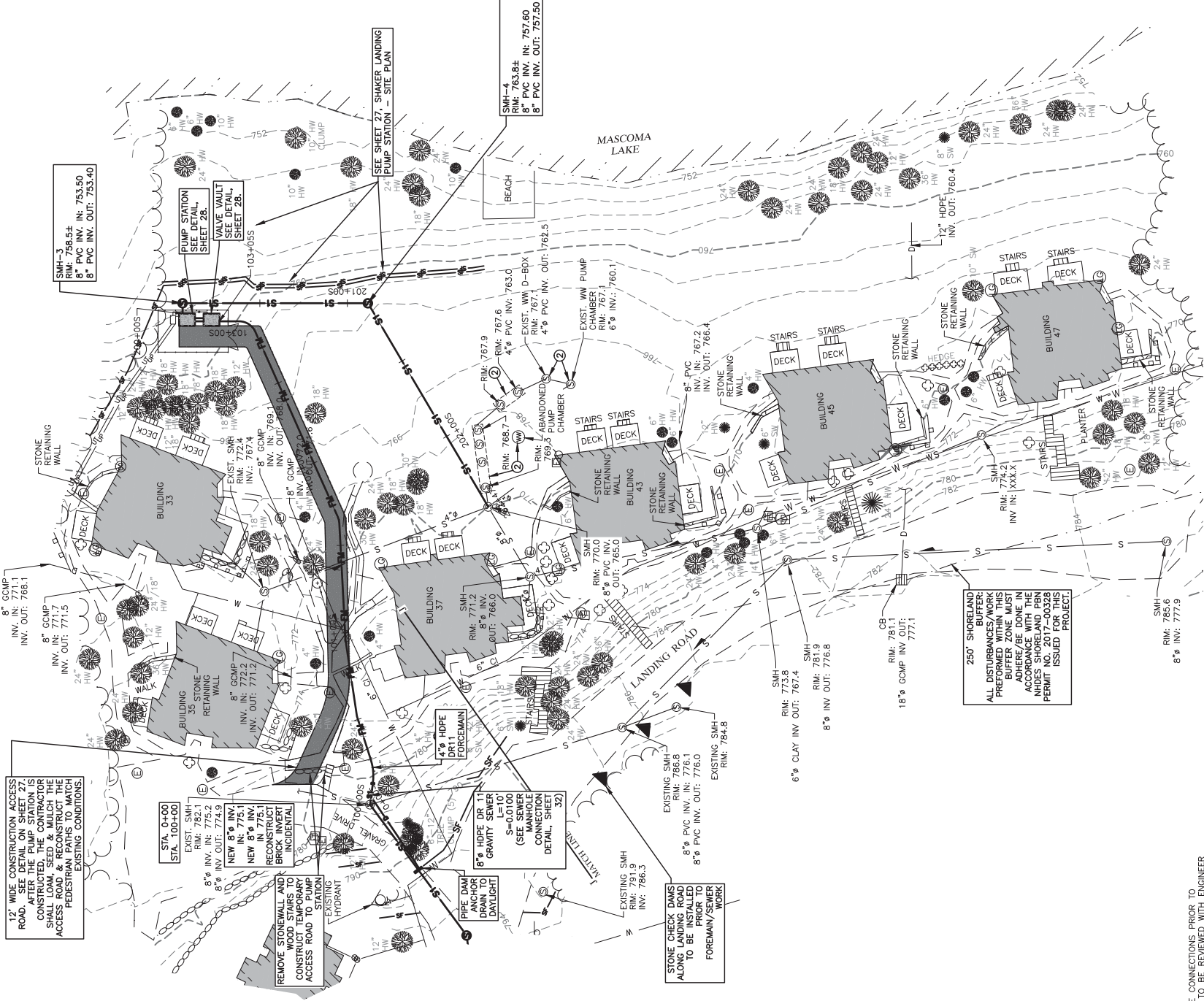
DRAWN BY: DPM/CRM

CHECKED BY: RJF

DATE: 03-01-17

PROJ. NO. 10068-05

SHEET 10 OF 39



SHAKER LANDING PLAN

FORCEMAIN SEWER STA. 100+00S TO 103+07S
GRAVITY SEWER STA. 200+00S TO 202+47S



SERVICE CONNECTION GENERAL NOTES:

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- 2. DECOMMISSION GRAVITY WASTEWATER SYSTEMS IN ACCORDANCE WITH EXISTING WASTEWATER DECOMMISSIONING NOTES ON SHEET 3. D-BOXES NEED TO BE LOCATED BY CONTRACTOR.
- 3. INSTALL CLEANSUITS WITH CAST-IRON COVERS AT ALL SERVICE CONNECTIONS TO EXISTING PIPES AND EXTEND TO GRADE.
- 4. ALL SERVICE LINES MUST HAVE A MINIMUM OF FOUR (4) FEET OF COVER IN CROSS-COUNTRY LOCATIONS AND SIX (6) FEET OF COVER IN ROAD/DRIVEWAY AND/OR OTHER TRAVEL-WAY CROSSINGS. EXCAVATION REQUIRED WHERE MINIMUM COVERS CANNOT BE ATTAINED. THESE LOCATIONS SHALL BE REVIEWED WITH ENGINEER.

FOR BIDDING
MARCH 1, 2017



TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

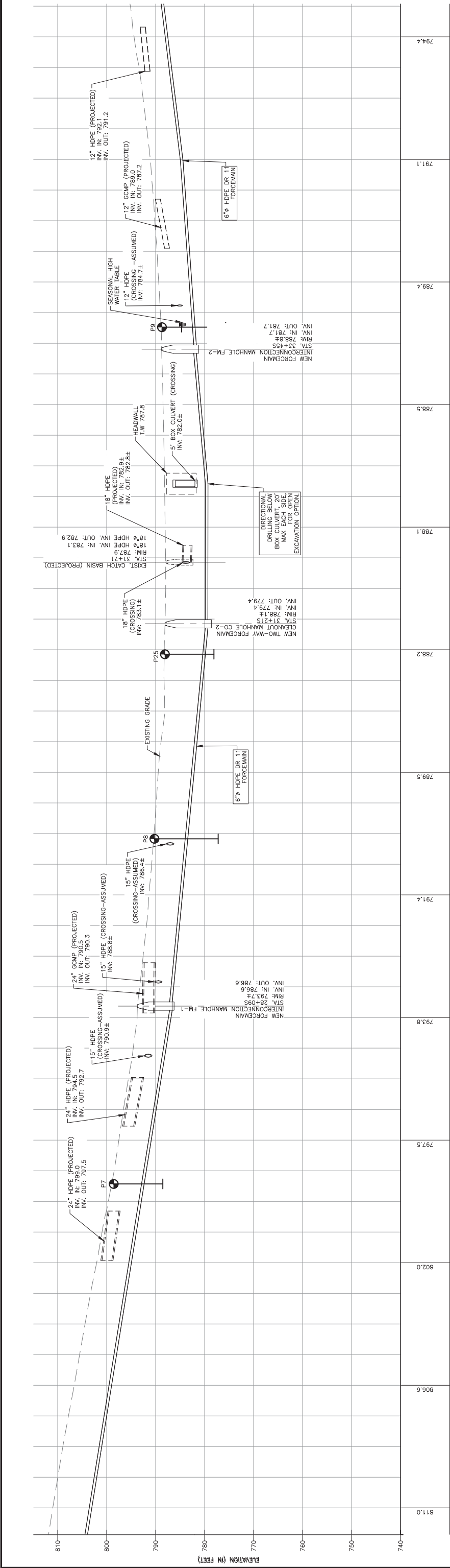
SHAKER LANDING SITE PLAN FOR

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

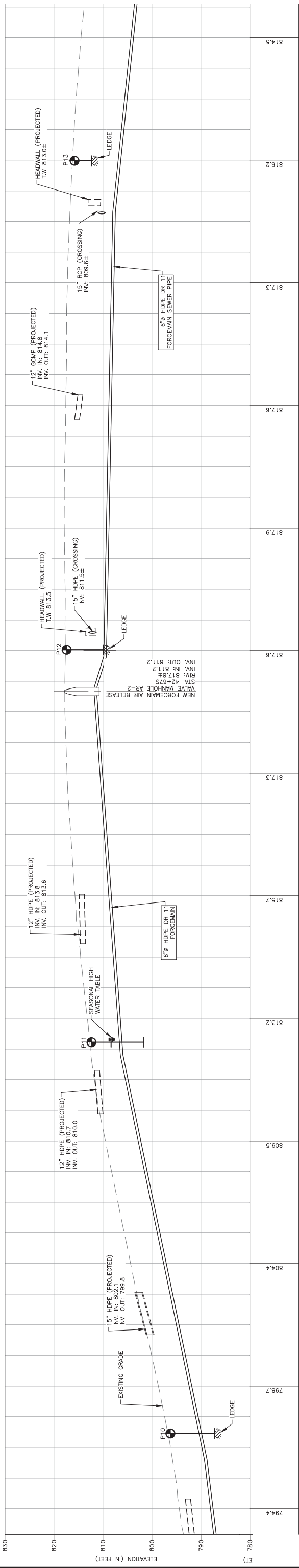
PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

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DATE: 03-01-17
PROJ. NO. 10068-05



PROFILE
FORCEMAIN SEWER STA. 24+00S TO 36+00S
STATIONING (IN FEET)

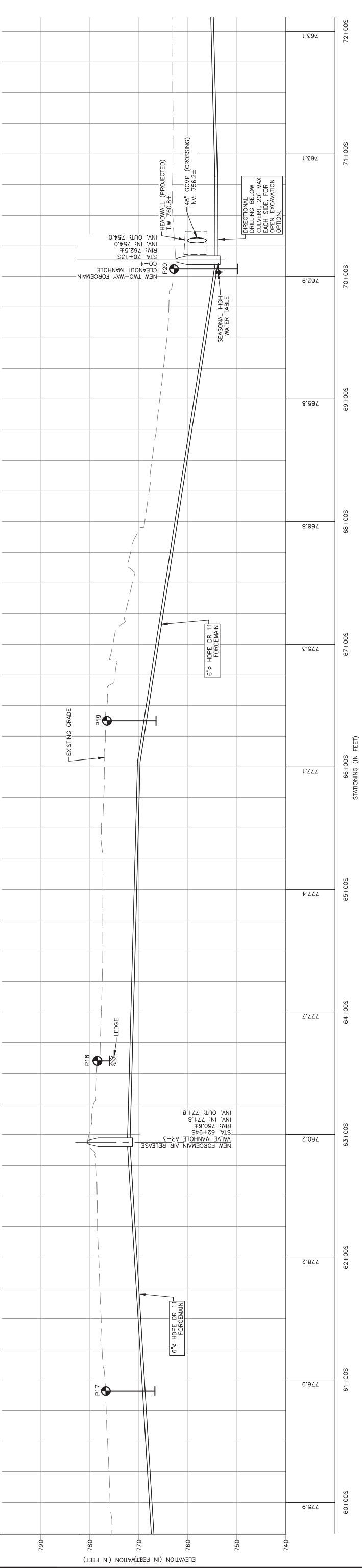
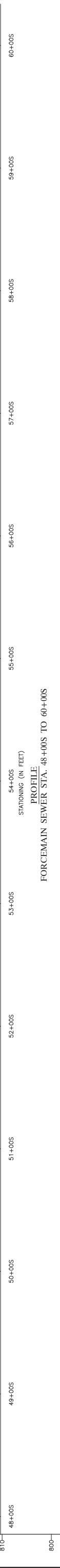
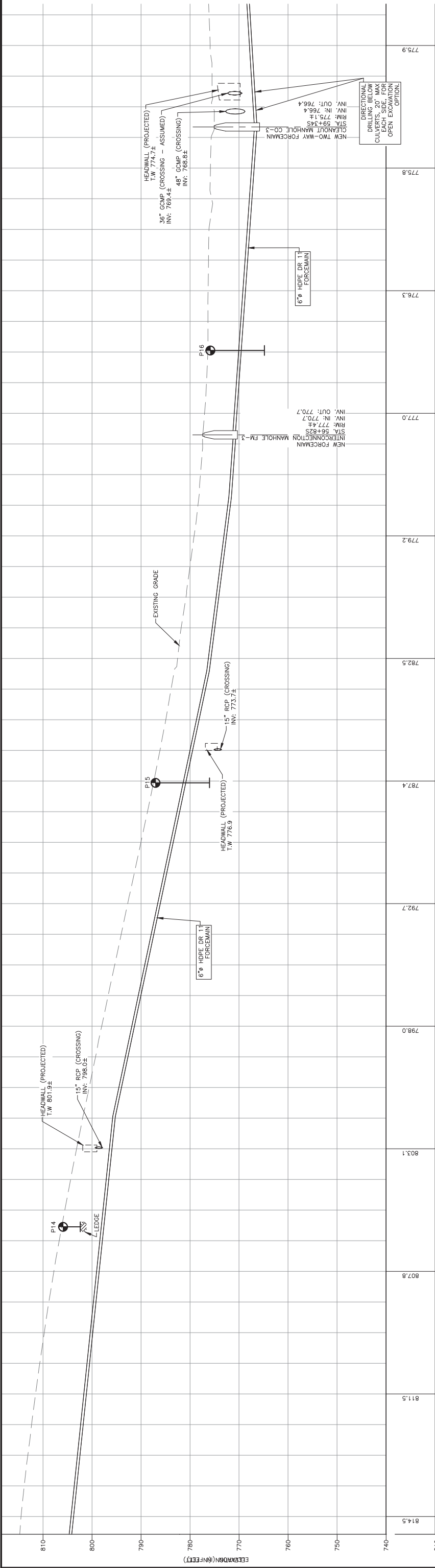


PROFILE
FORCEMAIN SEWER STA. 36+00S TO 48+00S
STATIONING (IN FEET)

FOR BIDDING
MARCH 1, 2017

VERTICAL: 0 10 20
IN FEET
HORIZONTAL: 0 40 80
IN FEET

SEWER EXTENSION PROFILE: STA. 24+00S TO 48+00S FOR				PATHWAYS CONSULTING, LLC				13			
								SCALE: AS SHOWN			
								DESIGNED BY: ISM			
								DRAWN BY: DPM/CRM			
								CHECKED BY: RJF			
								DATE: 03-01-17			
								PROJ. NO. 10068-05			
								SHEET 13 OF 39			



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MARCH 1, 2017

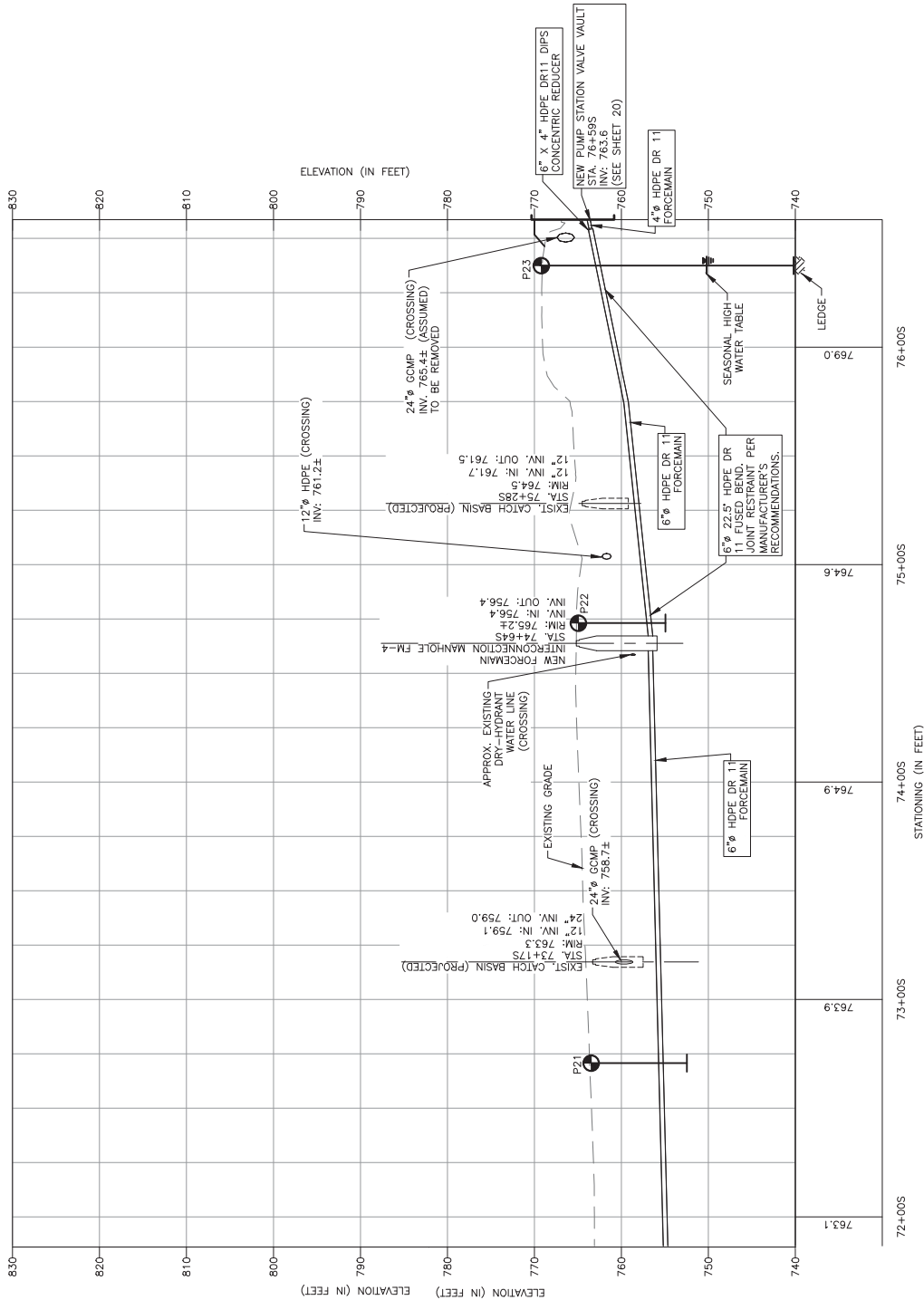
VERTICAL: 0 10 20 IN FEET

HORIZONTAL: 0 40 80 IN FEET

SEWER EXTENSION PROFILE: STA. 48+00S TO 72+00S FOR				PATHWAYS CONSULTING, LLC				14				
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION				240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200				SCALE: AS SHOWN				
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE								DESIGNED BY: ISM				
								DRAWN BY: DPM/CRM				
								CHECKED BY: RJF				
								DATE: 03-01-17				
								PROJ. NO. 10068-05				
								SHEET 14 OF 39				
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FOR BIDDING
MARCH 1, 2017



PROFILE
FORCEMAIN SEWER STA. 72+00S TO 76+58S

VERTICAL: 0 10 20
IN FEET

HORIZONTAL: 0 40 80
IN FEET

				SEWER EXTENSION PROFILE: STA. 72+00S TO 76+58S FOR				PATHWAYS CONSULTING, LLC				15			
								SCALE: AS SHOWN				DESIGNED BY: ISM			
												DRAWN BY: DPM/CRM			
												CHECKED BY: RJF			
												DATE: 03-01-17			
												PROJ. NO. 10068-05			
												SHEET 15 OF 39			

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

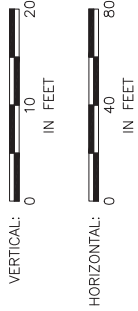
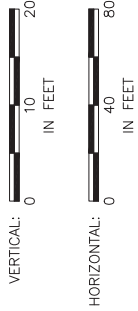
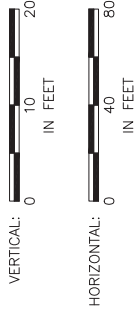
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

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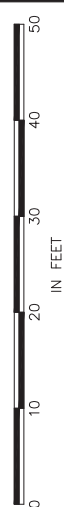
LAKEVIEW CONDOMINIUMS GRAVITY SEWER PROFILES FOR	PATHWAYS CONSULTING, LLC	SCALE: AS SHOWN
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE	240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200	DESIGNED BY: ISM
		DRAWN BY: DPM/CRM
		CHECKED BY: RJF
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		PROJ. NO. 10068-05
		16
		SHEET 16 OF 39

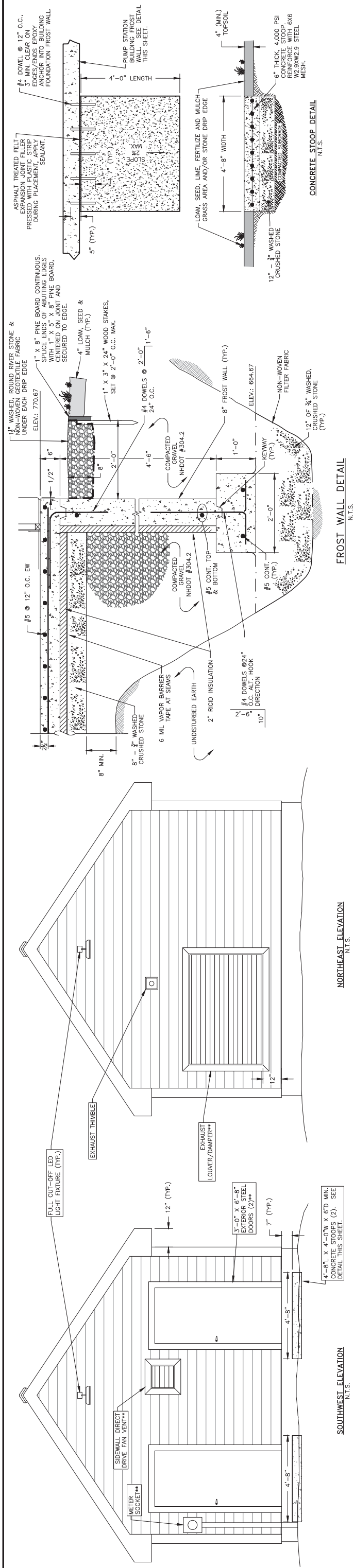
PATHWAYS CONSULTING, LLC
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(603) 448-2200

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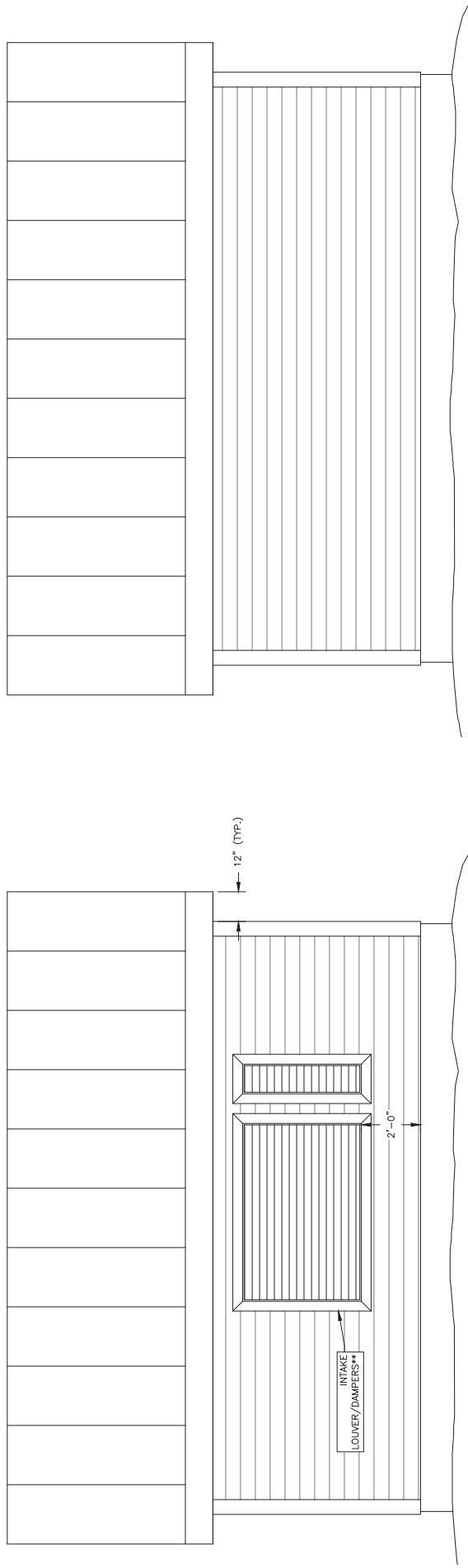


**FOR BIDDING
MARCH 1, 2017**

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** SEE PUMP STATION BUILDING NOTE 8.



** SEE PUMP STATION BUILDING NOTE 8.

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MARCH 1, 2017

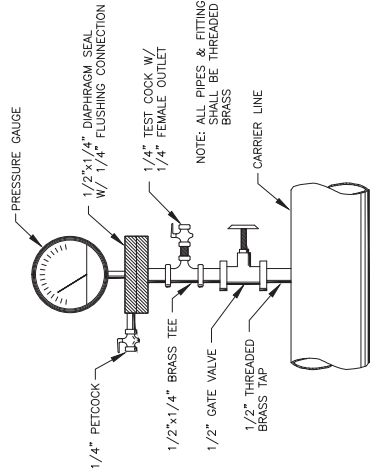
LAKEVIEW CONDOMINIUMS PUMP STATION – BUILDING ELEVATIONS AND DETAILS FOR
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

SCALE: AS SHOWN
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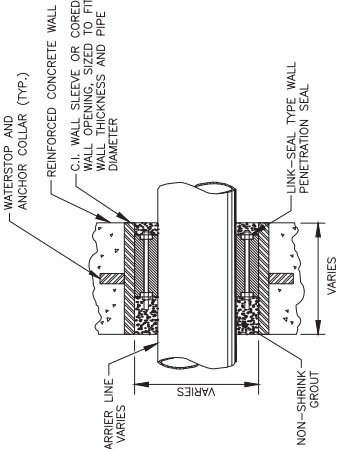
PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

PIPING SCHEDULE		
ITEM	QUANTITY	DESCRIPTION
1	1	8" P.E. X P.E. PVC SDR 35 PVC
2	2	4" FLANGED 90° ELBOW WITH BASE
3	4	4" FLANGED X P.E. DI PIPE
4	3	4" FLANGED 90° ELBOW
5	4	4" FLANGED X P.E. DI PIPE
6	3	4" M.J.I. LONG BODY SOLID SLEEVE
7	2	4" FLG. X FLG. CHECK VALVE W/ LEVER AND SPRING
8	4	4" FLG. X FLG. PLUG GATE VALVE W/ HANDWHEEL
9	AS NECESSARY	4" FLG. X FLG. DI PIPE
10	1	4" FLG. X FLG. 45° DI ELBOW
11	2	4" X 4" FLANGED DI WYE
12	1	6" X 4" HOPE DR11 DIPS CONCENTRIC REDUCER
13	AS NECESSARY	6" HOPE DR 11 PIPE
14	2	8" FLG. X P.E. DI WALL PIPE
15	2	8" FLG. X FLG. DI PIPE
16	4	8" FLANGED 90° DI ELBOW
17	1	12" FLG. X P.E. DI WALL PIPE
18	1	12" FLG. X FLG. DI PIPE
19	2	12" FLANGED 90° DI ELBOW
20	1	1 1/2" UNION
21	1	1 1/2" CHECK VALVE
22	AS NECESSARY	1 1/2" SCHEDULE 40 PVC PIPE
23	1	4" DI QUICK CONNECT/DISCONNECT ADAPTOR, CAP. & CHAIN
24	1	1 1/2" SCHEDULE 40 PVC PIPE (CHEMICAL FEED CONDUIT)
25	1	4" DIPS BELL MJ ADAPTOR - DR11 TO DI PIPE
26	1	4" HOPE DR 11 PIPE

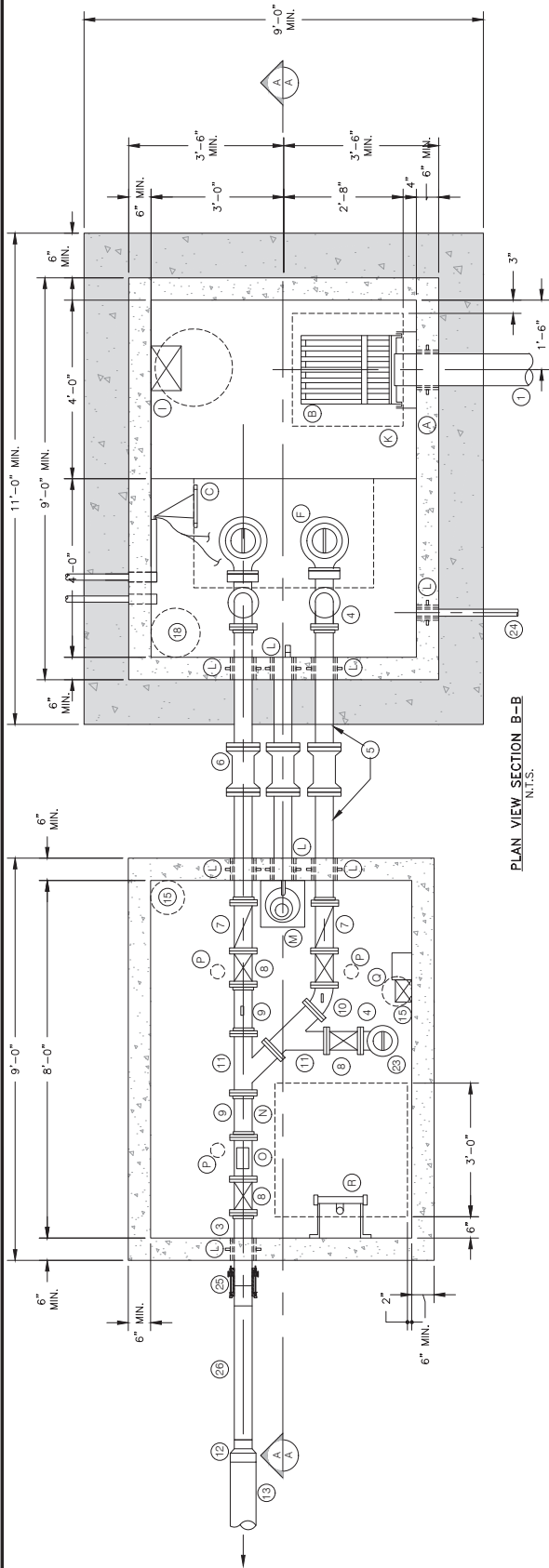
EQUIPMENT SCHEDULE	
ITEM	DESCRIPTION
A	8" WALL PENETRATION ASSEMBLY (SEE DETAIL THIS SHEET)
B	S.S. STRAINING BASKET W/ 2" CLEAR OPENINGS MAX., HANDLE AND RAILS
C	S.S. FLOAT SWITCH/TRANSDUCER MOUNTING BRACKET
D	2 MERCURY FLOAT SWITCHES
E	1 TRANSDUCER
F	2 3" SOLIDS HANDLING SUBMERSIBLE PUMP W/ QUICK CONNECT/DISCONNECT COUPLING
G	2 S.S. LIFTING CHAIN
H	4 S.S. PUMP GUIDE RAILS
I	1 BELT DRIVE CENTRIFUGAL EXHAUST FAN W/ 12" S.S. DUCT WORK
J	1 2'-6" X 4'-6" STAINLESS STEEL ACCESS HATCH
K	1 2'-6" X 2'-6" STAINLESS STEEL ACCESS HATCH
L	7 WALL PENETRATION ASSEMBLY (SEE DETAIL THIS SHEET)
M	1 SUMP PUMP W/ FLOAT
N	3 ADJUSTABLE PIPE SUPPORT
O	1 FLOW METER
P	3 CEILING MOUNTED LIGHT FIXTURE
Q	1 EXHAUST FAN AND DUCTWORK
R	1 ALUMINUM ACCESS LADDER AND SAFETY POST
S	AS NECESSARY 2" THICK CELLULAR GLASS INSULATION
T	1 3'-0" X 3'-0" STAINLESS STEEL ACCESS HATCH
U	2 S.S. 4" 0-100 PSI PRESSURE GAUGE



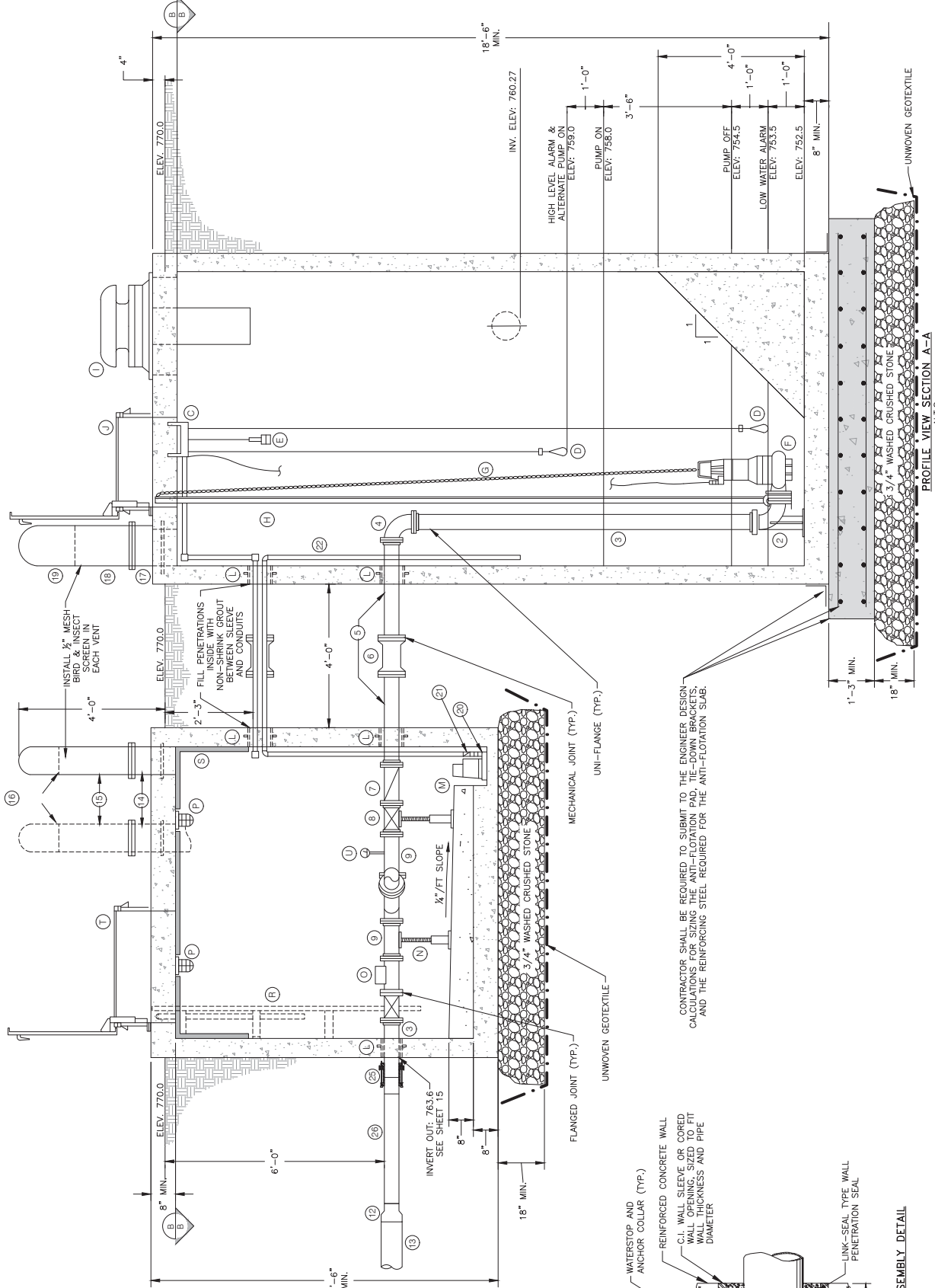
PRESSURE GAUGE CONNECTION
N.T.S.



WALL PENETRATION ASSEMBLY DETAIL
N.T.S.



PLAN VIEW SECTION B-B
N.T.S.



PROFILE VIEW SECTION A-A
N.T.S.

WET WELL NOTES:

1. WET WELL SHALL BE EXFILTRATION TESTED (LEAKAGE TESTED) AND PASS TEST BEFORE CONCRETE INFILL OR PUMPS ARE INSTALLED.
2. BACKFILL AROUND WET WELL AND STRUCTURE FOUNDATION SHALL MEET NHDOT REQUIREMENTS. GRAVEL BACKFILL SHALL BE USED. GRAVEL SHALL BE PLACED AROUND WET WELL AND STRUCTURE TO A MINIMUM OF 2' BACKFILL AROUND WET WELL AND STRUCTURE. STRUCTURE SHALL BE COMPACTED TO 95 PERCENT IN ACCORDANCE WITH ASTM D-1557. AS AN ALTERNATE, FLOWABLE FILL MEETING REQUIREMENTS OF NHDOT CONSTRUCTION CLASS F, FLOWABLE FILL EXCAVABLE MAY BE USED. NO ADDITIONAL CONSTRUCTION SHALL BE REQUIRED TO BE SHOWN ON THE DRAWINGS.
3. VENTILATION OF THE WET WELL SHALL BE PROVIDED AS SHOWN ON MECHANICAL PLANS.
4. A PERMANENT SIGN SHALL BE ATTACHED ON THE UNDERSIDE OF BOTH THE WET WELL ACCESS DOOR (S) AND THE ACCESS DOOR (S) WHICH READS "WARNING: NO ENTRY WITHOUT PROPER EQUIPMENT OR CONTAINED SPACE. ENTRY BY PERMIT ONLY"(PER ENV-WD 705.08).
5. CONTRACTOR SHALL FOLLOW PUMP MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF PUMPS, RAILS, AND BRACING. CONTRACTOR SHALL ENSURE WET WELL COVER OPENING IS CONFIGURED TO MEET PUMP MANUFACTURER'S REQUIREMENTS FOR COVER LIFTING. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS OF THE WET WELL AND PUMP INSTALLATION.
6. PROVIDE ANTI-BUOYANCY SLAB FOR WET WELL. ASSUME WATER TABLE OUTSIDE WET WELL TO BE AT GRADE AND ASSUME THE WET WELL IS EMPTY.
7. ALL WET WELL PENETRATIONS SHALL BE PROTECTED AGAINST LEAKAGE. LEAKAGE TESTING SHALL BE CONDUCTED WITH PIPE PENETRATIONS IN PLACE.

LAKEVIEW CONDOMINIUMS PUMP STATION DESIGN CALCULATIONS:

134 UNITS X 225 GPD UNIT = 30,150 GPD

ADF = 30,150 GPD (24 HOURS) (60 MIN) = 20.9 GPM

ASSUME PEAKING FACTOR = 6

PEAK FLOW = 20.9 GPM X 6 = 126 GPM

6" DIAMETER FORCEMAIN

260 GPM = 3.0 FPS

HIGH POINT = 812.0 FT

PUMP OFF = - 754.5 FT

C = 120

h_f = 7.15 FT/1000 FT

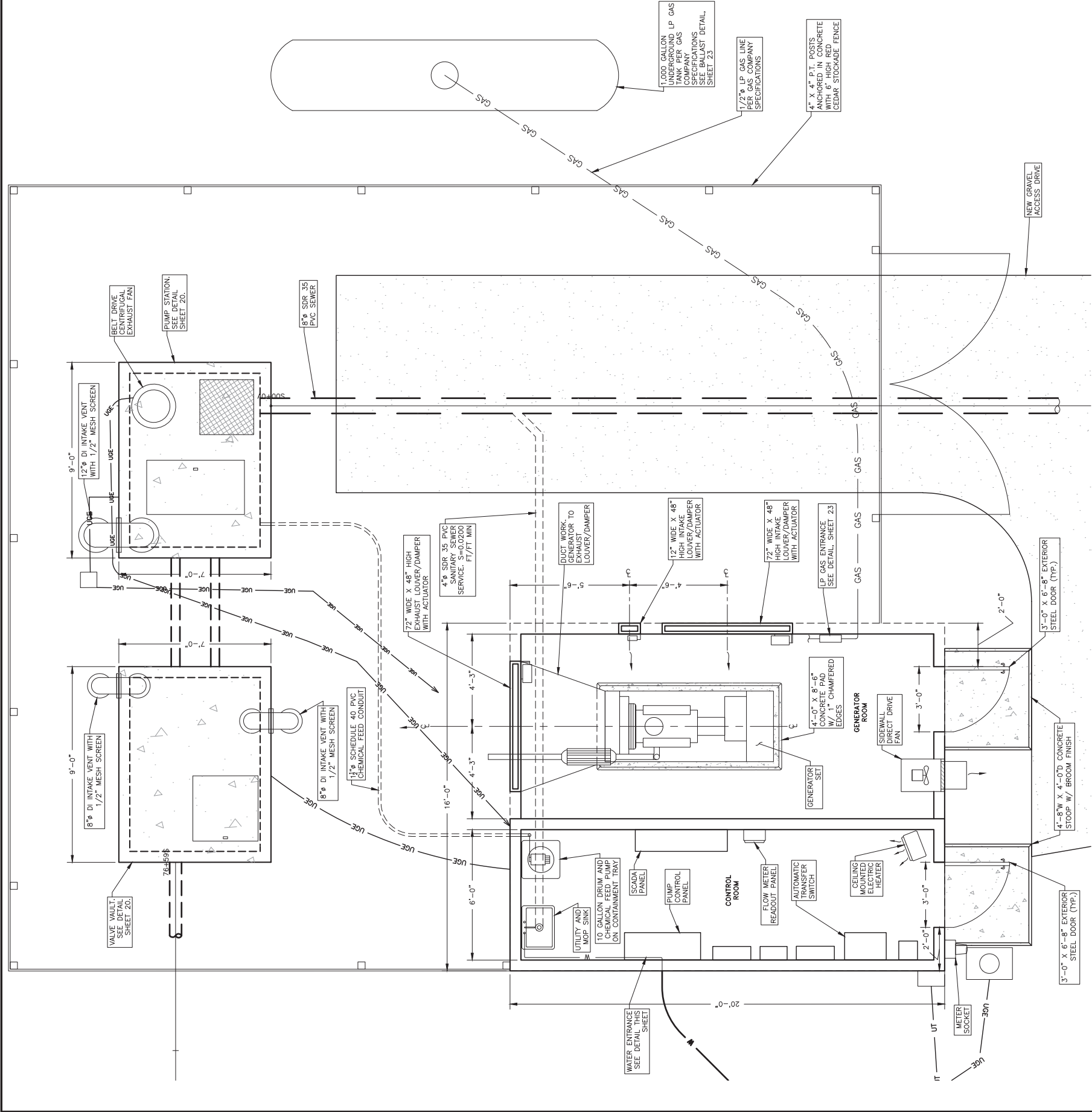
LENGTH FORCEMAIN = 7445 FT

(7.15 FT/1000 FT) X 7445 FT = 53.2 FT FRICTION LOSS

TOTAL DYNAMIC HEAD = 57.5 FT STATIC + 53.2 FT DYNAMIC = 110.7 FT

PUMP DESIGN POINT 260 GPM @ 110.7 FT TDH

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION				PATHWAYS CONSULTING, LLC		FOR BIDDING MARCH 1, 2017	
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE				240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200		20	
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY	SCALE: AS SHOWN	DESIGNED BY: RJF
						DRAWN BY: DPM	CHECKED BY: RJF
						DATE: 03-01-17	PROJ. NO. 10068-05
						SHEET 20 OF 39	

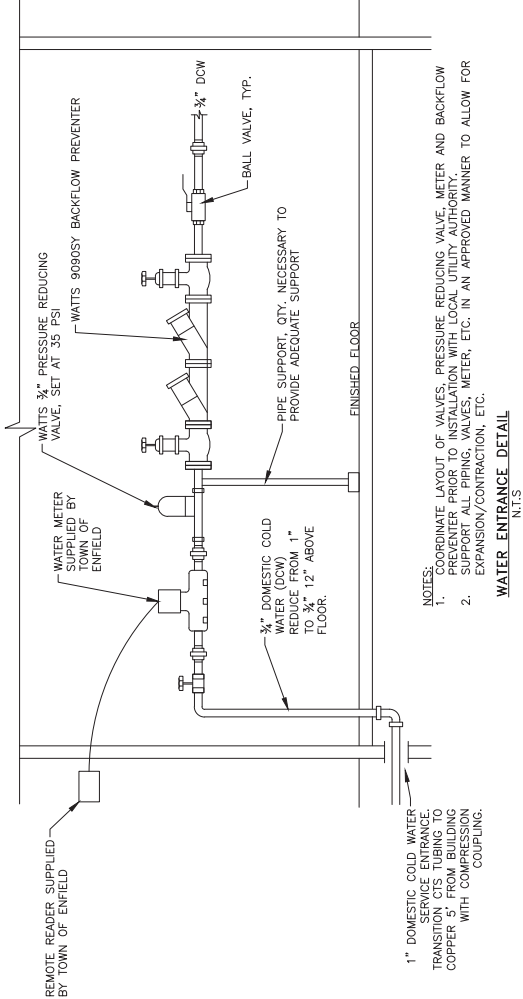


MECHANICAL/PLUMBING PLAN

SCALE: 3/8" = 1'-0"

GENERAL NOTES:

1. CONTRACT DOCUMENTS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE & GENERAL ARRANGEMENT. DESIGN INTENT AND EXTENT OF THE WORK. VERIFY ALL SPACES IN WHICH WORK WILL BE PERFORMED BY THE CONTRACTOR. VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL EQUIPMENT. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
2. DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS, UNLESS OTHERWISE INDICATED.
3. WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST IMC, NEC, NFPA, IBC, ICC, ASHRAE GUIDE, SMACNA, ANY GOVERNING ENERGY CODES, UNDERWRITERS LABORATORIES, AND ALL MUNICIPAL, STATE AND OTHER AUTHORITIES, PUBLIC AND PRIVATE HAVING JURISDICTION. REPORT ALL DISCREPANCIES WITH THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE ENGINEER.
4. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL CODES AND STANDARDS INCLUDING, BUT NOT LIMITED TO, NFPA, IBC, UL, SMACNA, OSHA, AND NEC.
5. ALL MATERIALS SHALL BE OF THE BEST QUALITY AND TYPE BY COMPETENT MECHANICS SKILLED IN THEIR TRADES. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS DIVISION SHALL BE NEW AND EACH ARTICLE OF ITS KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.
6. THE WORKMANSHIP AND MATERIALS COVERED BY THESE SPECIFICATIONS WILL CONFORM TO ALL ORDINANCES AND APPLICABLE REGULATIONS OF THE TOWN, COUNTY AND STATE.
7. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AS THERE MAY BE VARIOUS CONDITIONS AT THE SITE WHICH DO NOT SHOW ON THE ACCOMPANYING DRAWINGS, OR WHICH ARE AT VARIANCE WITH THE CONDITIONS INDICATED THEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS PRIOR TO THE BEGINNING OF THE WORK. THE CONTRACTOR SHALL OBTAIN ALL INFORMATION OR MAKE ALL MEASUREMENTS DESIRED ON THE SITE. LACK OF KNOWLEDGE RELATIVE TO THE EXISTING SITE CONDITION WILL NOT BE ALLOWED AS A BASIS FOR A CLAIM.
8. CONTRACTOR SHALL COORDINATE WITH EXISTING CONDITIONS TO AVOID INTERFERENCE. NO CHANGE IN CONTRACT PRICE WILL BE ALLOWED BECAUSE OF ANY WORK MADE NECESSARY BY FAILURE TO DO THE REQUIRED COORDINATION.
9. CONTRACTOR AND SUBCONTRACTORS SHALL PROTECT THE WORK SITE, SURROUNDING AREAS AND OCCUPANTS THEREOF FROM DAMAGE DURING THE CONSTRUCTION OF THE PROJECT.
10. CONTRACTOR AND ALL SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS. ALL DRAWINGS OF ANY PARTICULAR TRADE SHALL BE USED IN CONJUNCTION WITH DRAWINGS OF ALL OTHER TRADES TO COORDINATE ALL CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE ENGINEER.
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12. COORDINATE WORK WITH OTHER BUILDING AND SITE TRADES PRIOR TO EQUIPMENT INSTALLATION.
13. TAKE ALL NECESSARY MEASUREMENTS AT THE BUILDING AND FABRICATE THE DUCTWORK AND PIPING ON SITE PRIOR TO THE BEGINNING OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS PRIOR TO THE BEGINNING OF THE WORK. THE CONTRACTOR SHALL OBTAIN ALL INFORMATION OR MAKE ALL MEASUREMENTS DESIRED ON THE SITE. LACK OF KNOWLEDGE RELATIVE TO THE EXISTING SITE CONDITION WILL NOT BE ALLOWED AS A BASIS FOR A CLAIM.
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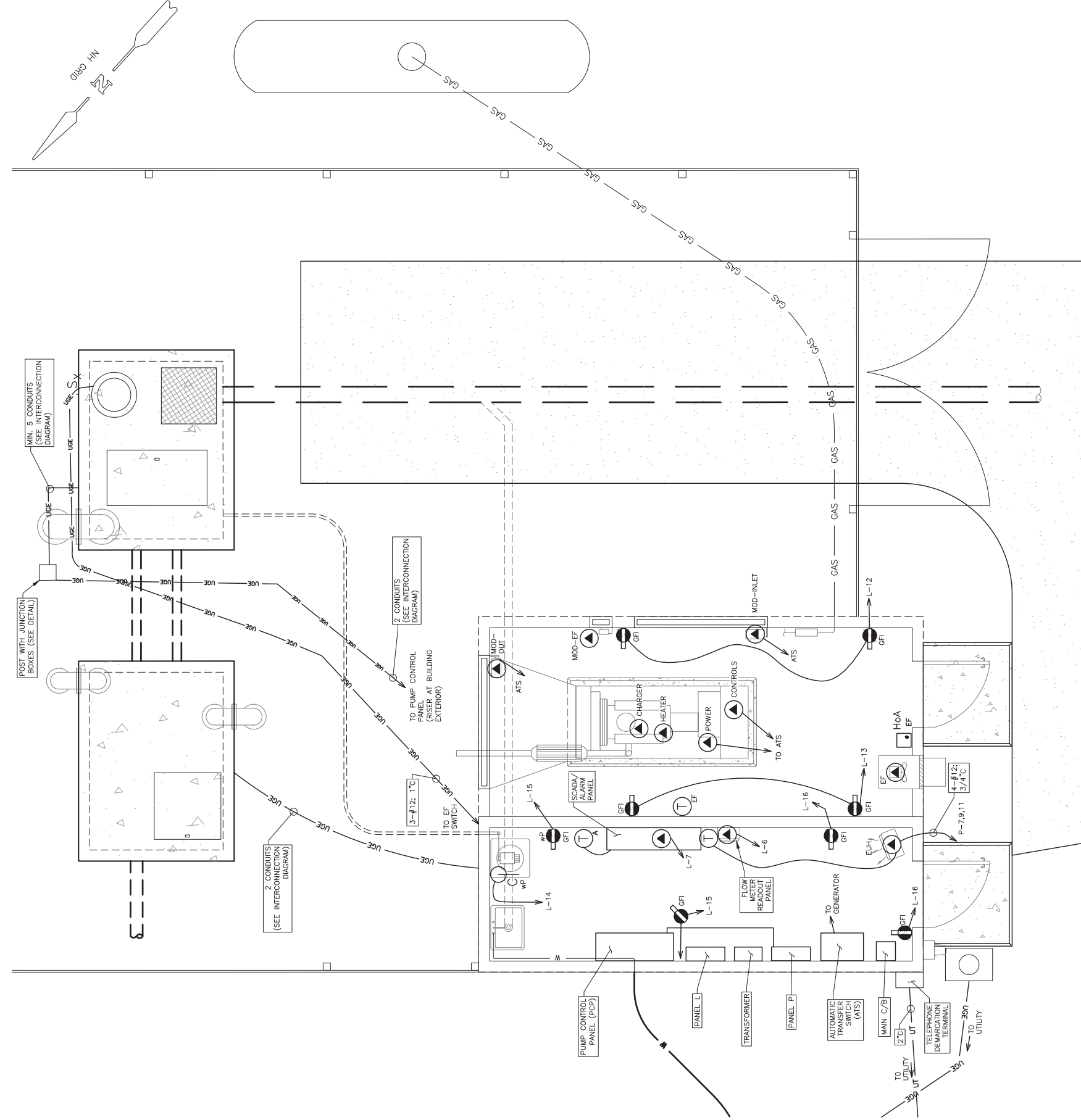


FOR BIDDING
MARCH 1, 2017

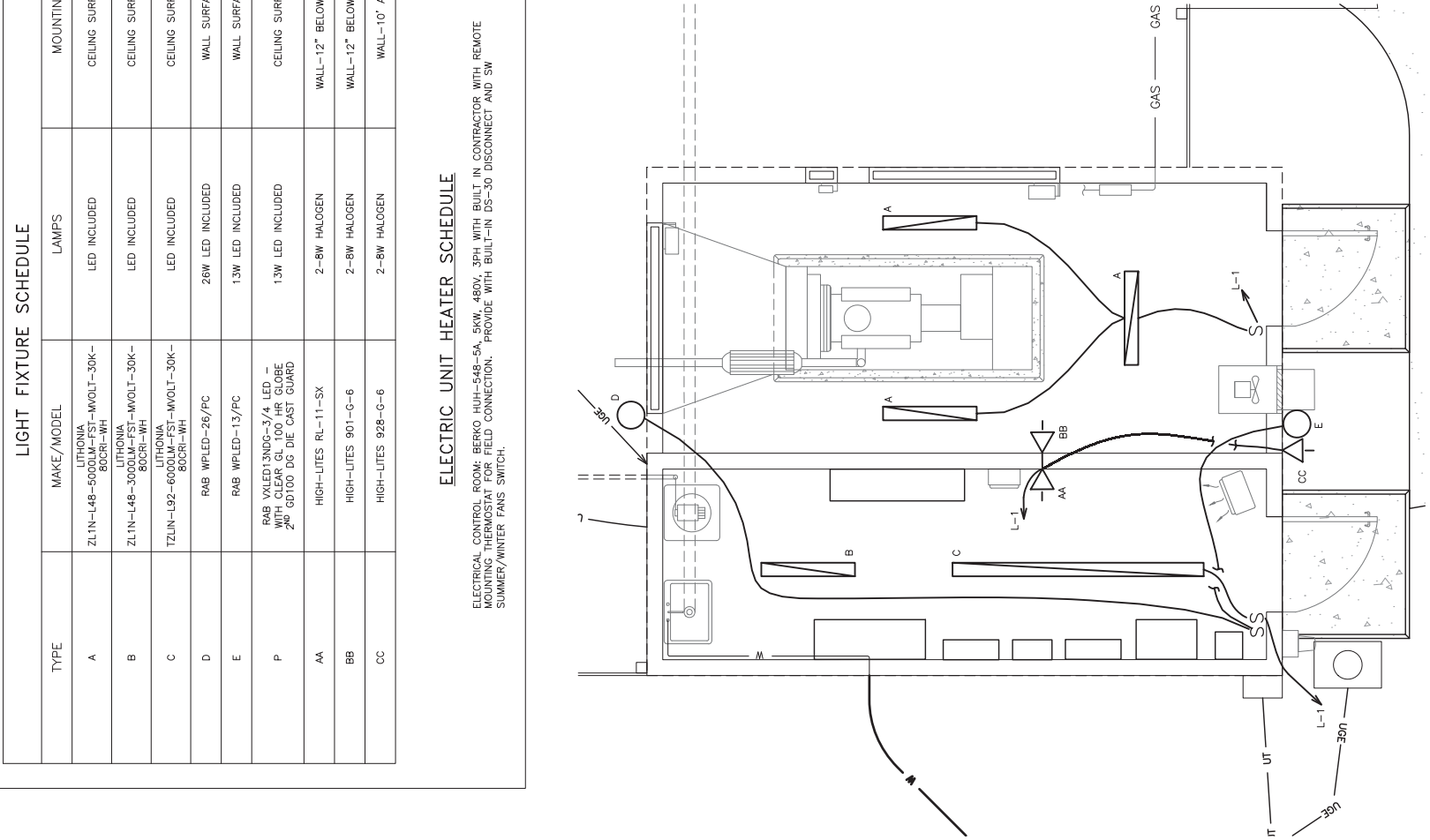
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

LAKEVIEW CONDOMINIUMS PUMP STATION – MECHANICAL DETAILS FOR
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC	
240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200	



ELECTRICAL PLAN: POWER
SCALE: 3/8" = 1'-0"



ELECTRICAL PLAN: LIGHTING
SCALE: 3/8" = 1'-0"



FOR BIDDING
MARCH 1, 2017

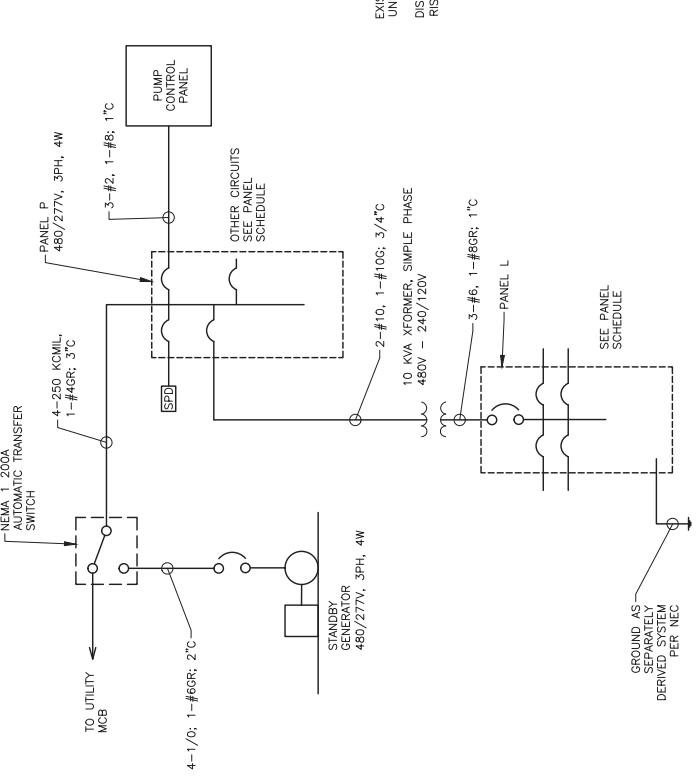
LIGHT FIXTURE SCHEDULE			
TYPE	MAKE/MODEL	LAMPS	MOUNTING
A	LITHONIA ZLIN-L48-500CLM-FST-MVOLT-30K-80CRI-WH	LED INCLUDED	CEILING SURFACE
B	LITHONIA ZLIN-L48-300CLM-FST-MVOLT-30K-80CRI-WH	LED INCLUDED	CEILING SURFACE
C	LITHONIA TZLIN-L92-600CLM-FST-MVOLT-30K-80CRI-WH	LED INCLUDED	CEILING SURFACE
D	RAB WPLED-26/PC	26W LED INCLUDED	WALL SURFACE
E	RAB WPLED-13/PC	13W LED INCLUDED	WALL SURFACE
P	RAB WPLED-26/PC 3/4 LED - W/100 HR CLEAR 2ND G0100 DG DIE CAST GUARD	13W LED INCLUDED	CEILING SURFACE
AA	HIGH-LITES RL-11-SX	2-8W HALOGEN	WALL-12" BELOW CEILING
BB	HIGH-LITES 901-G-6	2-8W HALOGEN	WALL-12" BELOW CEILING
CC	HIGH-LITES 928-G-6	2-8W HALOGEN	WALL-10' AFG

ELECTRIC UNIT HEATER SCHEDULE

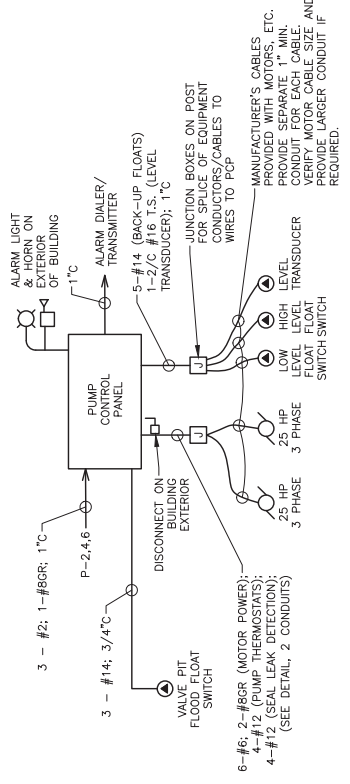
ELECTRICAL CONTROL ROOM: BERKO HUH-548-5A, 5KW, 3PH, WITH BUILT IN CONTRACTOR WITH REMOTE MOUNTING THERMOSTAT FOR FIELD CONNECTION. PROVIDE WITH BUILT-IN DS-30 DISCONNECT AND SW SUMMER/WINTER FANS SWITCH.

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

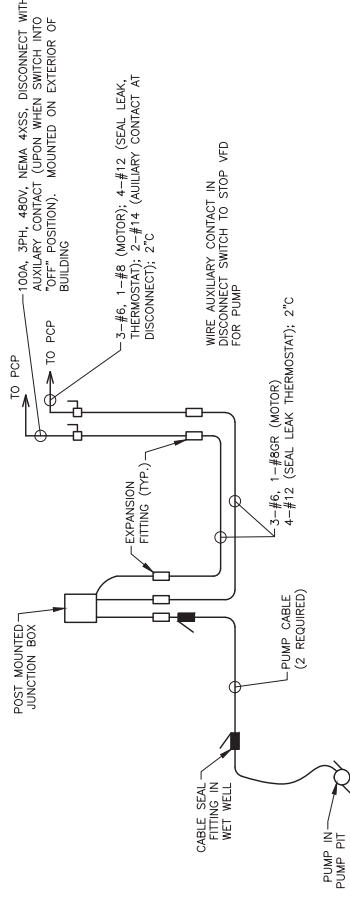
LAKEVIEW CONDOMINIUMS PUMP STATION – ELECTRICAL PLAN AND DETAILS FOR					
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION					
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE					
PATHWAYS CONSULTING, LLC					
240 MECHANIC STREET, SUITE 100					
LEBANON, NEW HAMPSHIRE 03766					
(603) 448-2200					
SCALE: AS SHOWN					
DESIGNED BY: LC					
DRAWN BY: CRM/DFM					
CHECKED BY:					
DATE: 03-01-17					
PROJ. NO. 10068-05					
SHEET 23 OF 39					



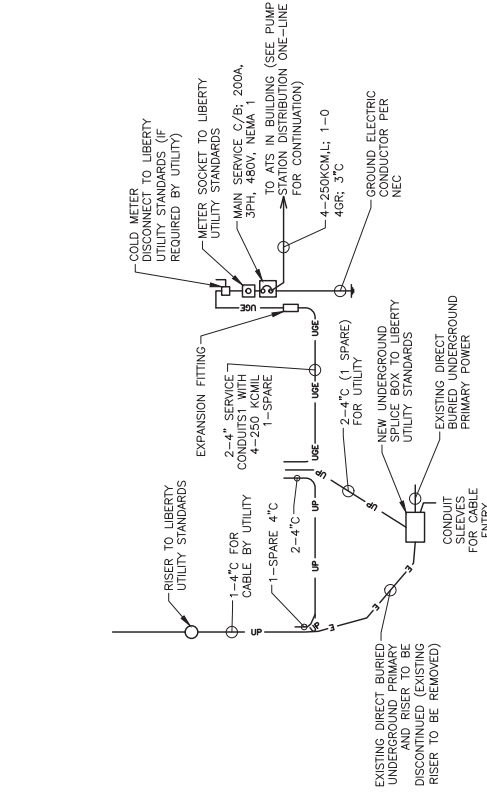
DISTRIBUTION ONE-LINE DIAGRAM
N.T.S.



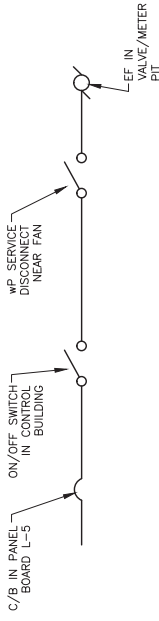
PUMP CONTROL PANEL
INTERCONNECTION DIAGRAM
N.T.S.



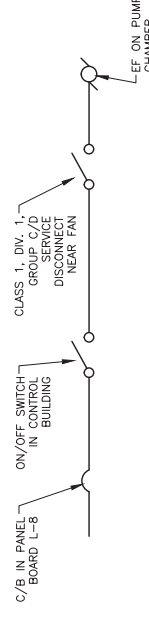
WIRING DETAIL – WASTEWATER
PUMP INTERCONNECTIONS
N.T.S.



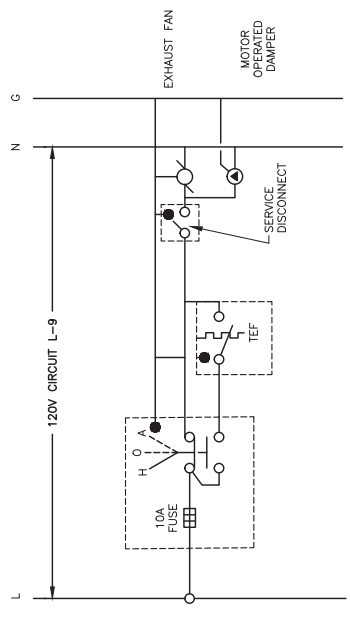
ONE-LINE DIAGRAM – UTILITY & SERVICE
N.T.S.



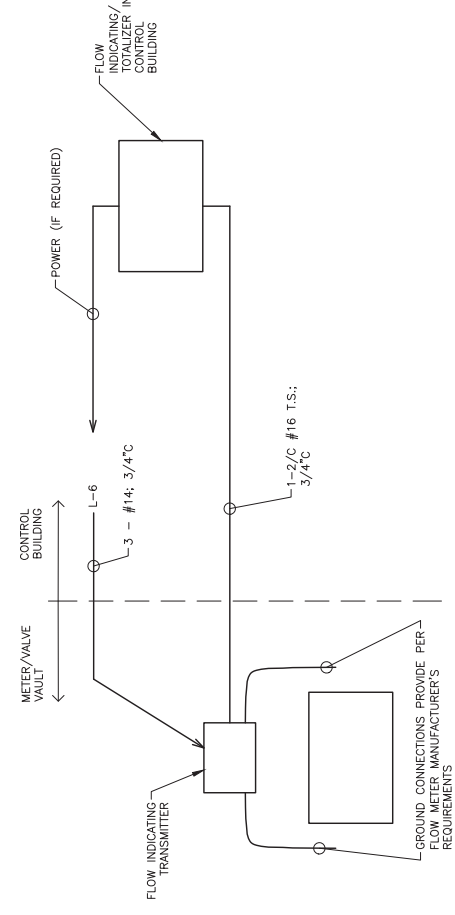
TYPICAL INTERCONNECTION DIAGRAM
VALVE/METER PIT EXHAUST FAN
N.T.S.



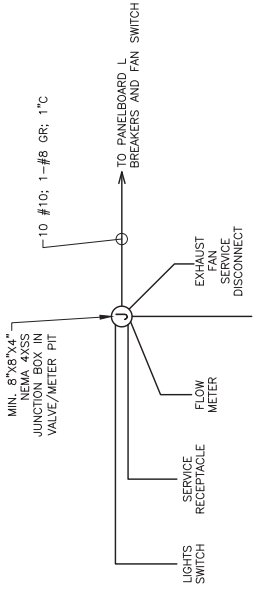
TYPICAL INTERCONNECTION DIAGRAM
PUMP CHAMBER/WET WELL
EXHAUST FAN
N.T.S.



TYPICAL W/D GENERATOR ROOM
EXHAUST FAN
N.T.S.



FLOW METER INTERCONNECTION DIAGRAM
N.T.S.



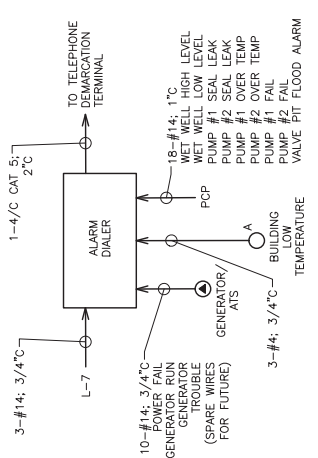
TYPICAL POWER JUNCTION BOX AT VALVE/METER PIT
N.T.S.



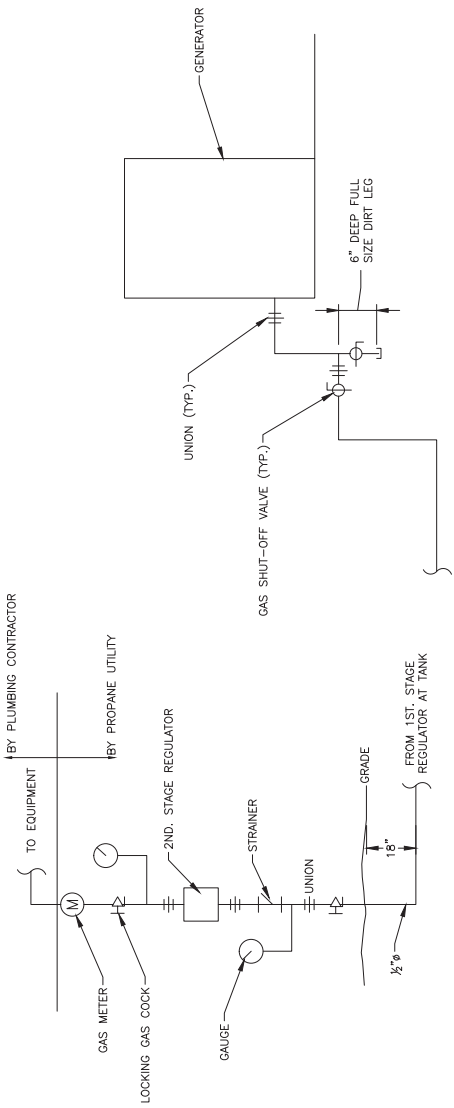
TYPICAL SIGNAL JUNCTION BOX AT VALVE/METER PIT
N.T.S.



FOR BIDDING
MARCH 1, 2017

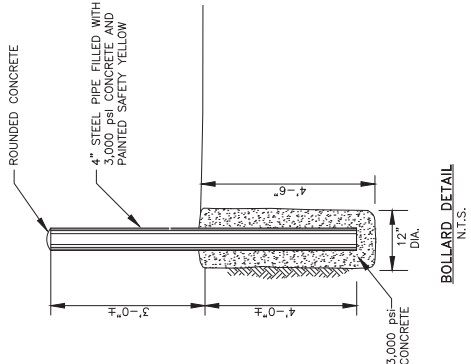


ALARM INTERCONNECTION DIAGRAM
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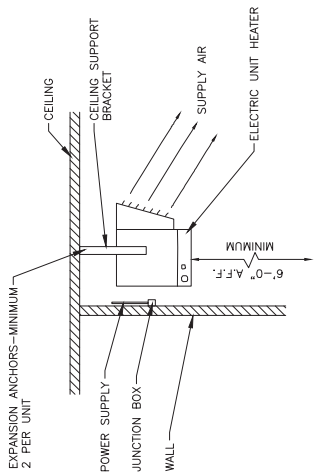


GAS ENTRANCE DETAIL
N.T.S.

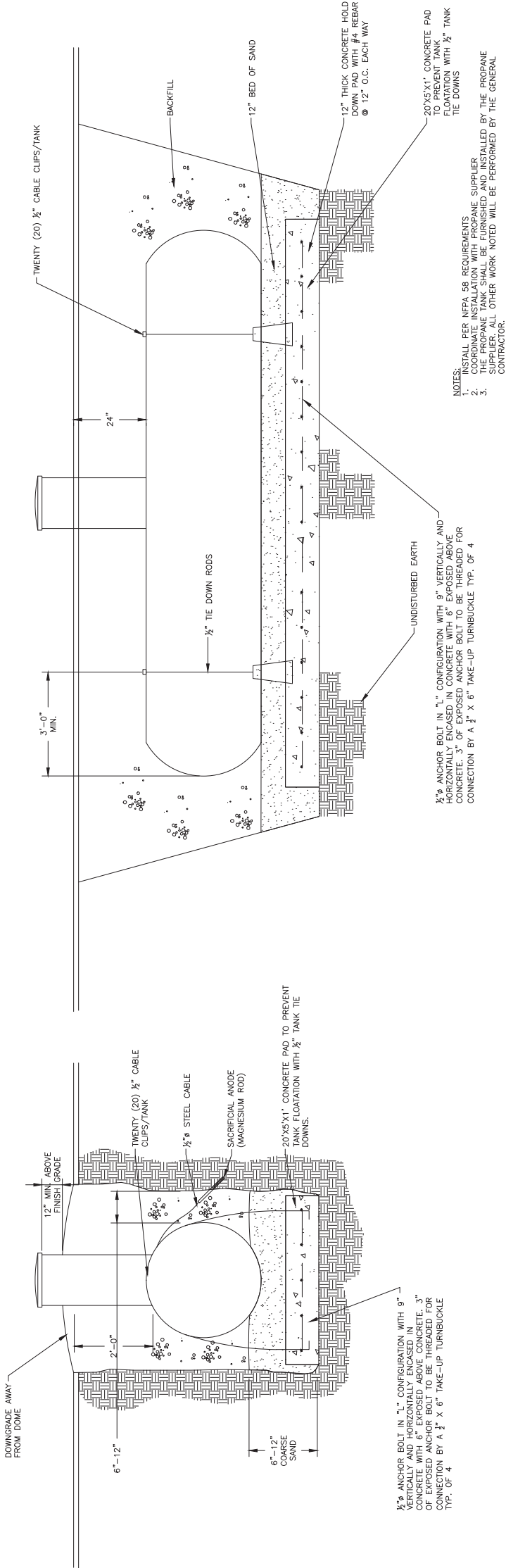
GAS CONNECTION DETAIL
N.T.S.



BOLLARD DETAIL
N.T.S.



ELECTRIC UNIT HEATER MOUNTING DETAIL
N.T.S.



1,000 GALLON UNDERGROUND TANK INSTALLATION DETAIL
N.T.S.



FOR BIDDING
MARCH 1, 2017

LAKEVIEW CONDOMINIUMS PUMP STATION – MISCELLANEOUS DETAILS FOR				PATHWAYS CONSULTING, LLC				SCALE: AS SHOWN		DESIGNED BY: ISM		DRAWN BY: CRM		CHECKED BY: RJF		DATE: 03-01-17		PROJ. NO. 10068-05		SHEET 26 OF 39	
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION				240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200																	
REVISION NO.				DATE				DESCRIPTION		MADE BY		CHECKED BY		APPROVED BY							

GENERAL NOTES:

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FOR BIDDING
MARCH 1, 2017

REVISION NO.	DATE	DESCRIPTION
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MADE BY

CHECKED BY

APPROVED BY

SHAKER LANDING PUMP STATION – SITE PLAN FOR

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: AS SHOWN

DESIGNED BY: ISM

DRAWN BY: CRM

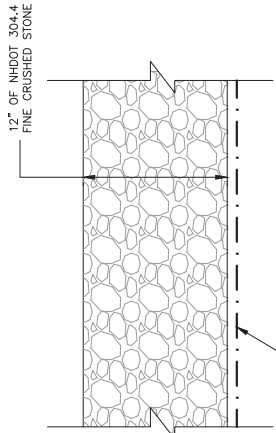
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DATE: 03-01-17

PROJ. NO. 10068-05

SHEET 27 OF 39

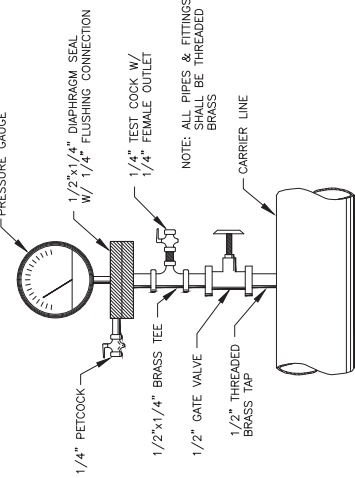
27



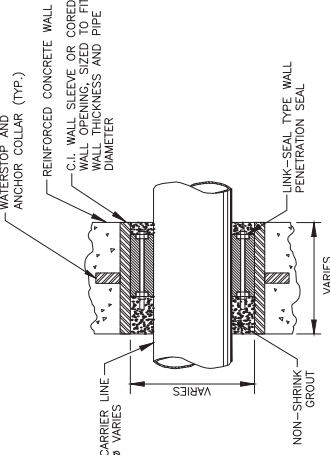
CONSTRUCTION ACCESS ROAD DETAIL
N.T.S.

PIPING SCHEDULE		
ITEM	QUANTITY	DESCRIPTION
1	1	8" P.E. X P.E. PVC SDR 35 PVC
2	2	4" FLANGED 90° ELBOW WITH BASE
3	3	4" FLANGED X P.E. DI PIPE
4	3	4" FLANGED 90° ELBOW
5	5	4" FLANGED X P.E. DI PIPE
6	3	4" M.J. LONG BODY SOLID SLEEVE
7	2	4" FLG. X FLG. CHECK VALVE W/ LEVER AND SPRING
8	4	4" FLG. X FLG. PLUG VALVE W/ HANDWHEEL
9	AS NECESSARY	4" FLG. X FLG. DI PIPE
10	1	4" FLG. X FLG. 45° DI ELBOW
11	2	4" X 4" FLANGED DI WYE
14	2	4" FLG. X P.E. DI WALL PIPE
15	2	4" FLG. X FLG. DI PIPE
16	4	4" FLANGED 90° DI ELBOW
17	1	8" FLG. X P.E. DI WALL PIPE
18	1	8" FLG. X FLG. DI PIPE
19	2	8" FLANGED 90° DI ELBOW
20	1	1 1/2" UNION
21	1	1 1/2" CHECK VALVE
22	AS NECESSARY	1 1/2" SCHEDULE 40 PVC PIPE
23	1	4" DI QUICK CONNECT/DISCONNECT ADAPTOR, CAP. & CHAIN
25	1	4" DIPS BELL MJ ADAPTOR - DR11 TO DI PIPE
26	1	4" HOPE DR 11 PIPE

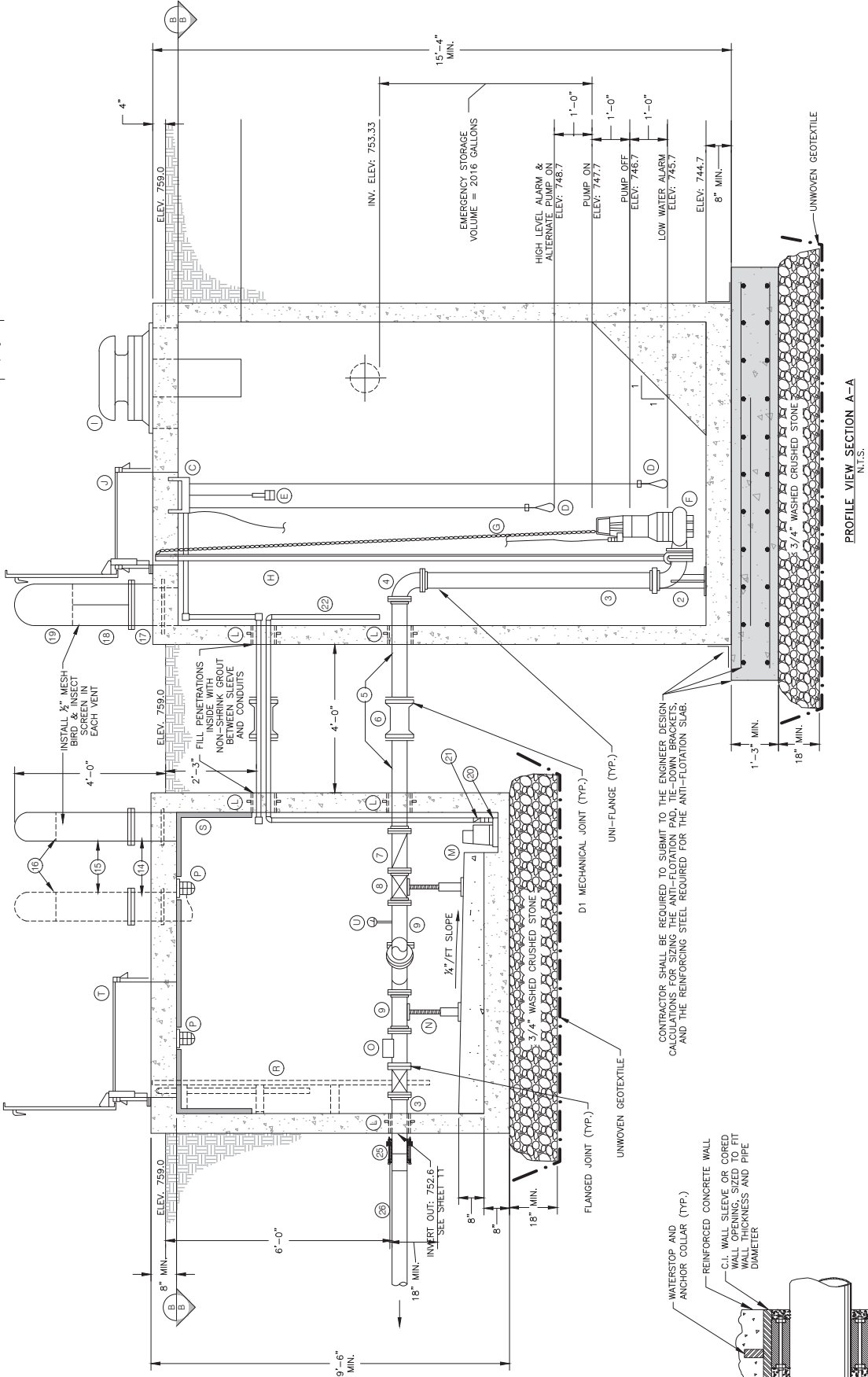
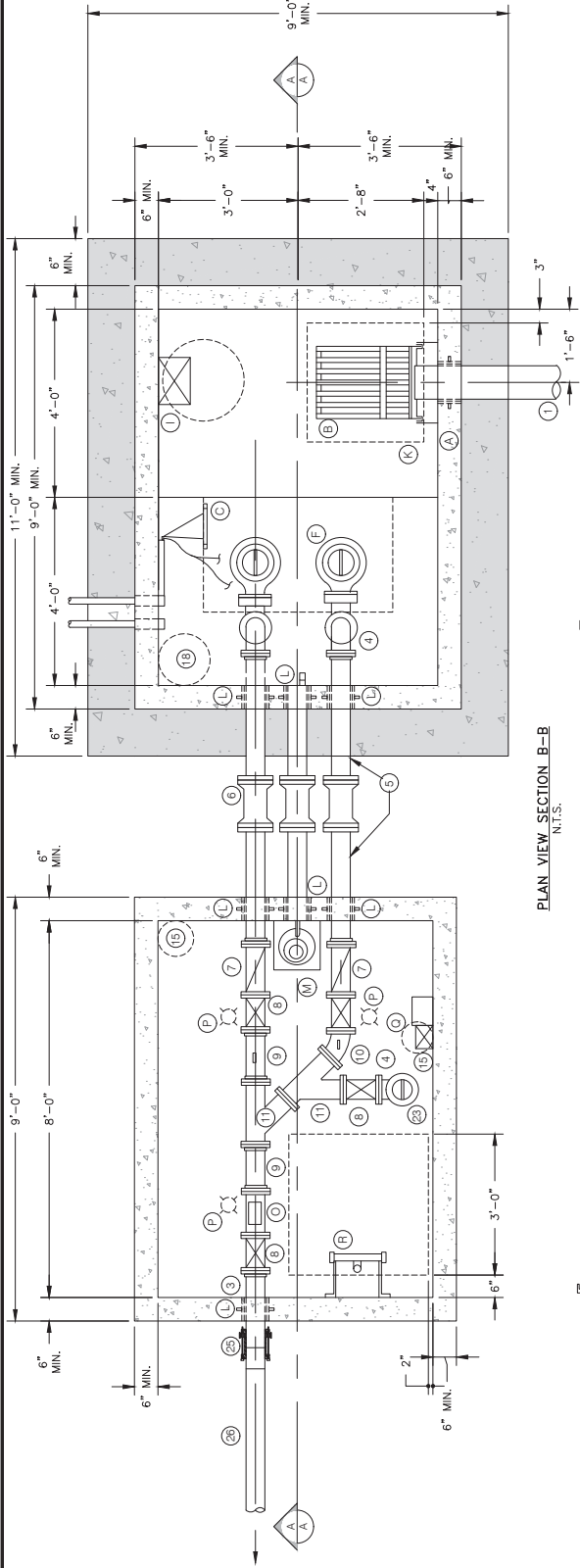
EQUIPMENT SCHEDULE		
ITEM	QUANTITY	DESCRIPTION
A	1	8" WALL PENETRATION ASSEMBLY (SEE DETAIL THIS SHEET)
B	1	S.S. STRAINING BASKET W/ 2" CLEAR OPENINGS MAX., HANDLE AND RAILS
C	1	S.S. FLOAT SWITCH/TRANSUCER MOUNTING BRACKET
D	2	MERCURY FLOAT SWITCHES
E	1	TRANSUCER
F	2	3" SOLIDS HANDLING SUBMERSIBLE PUMP W/ QUICK CONNECT/DISCONNECT COUPLING
G	2	S.S. LIFTING CHAIN
H	4	S.S. PUMP GUIDE RAILS
I	1	BELT DRIVE CENTRIFUGAL EXHAUST FAN W/ 12" S.S. DUCT WORK
J	1	2'-6" X 4'-6" STAINLESS STEEL ACCESS HATCH
K	1	2'-6" X 2'-6" STAINLESS STEEL ACCESS HATCH
L	7	4" WALL PENETRATION ASSEMBLY (SEE DETAIL THIS SHEET)
M	1	SUMP PUMP W/ FLOAT
N	3	ADJUSTABLE PIPE SUPPORT
O	1	FLOW METER
P	3	CEILING MOUNTED LIGHT FIXTURE
Q	1	EXHAUST FAN AND DUCTWORK
R	1	ALUMINUM ACCESS LADDER AND SAFETY POST
S	AS NECESSARY	2" THICK CELLULAR GLASS INSULATION
T	1	3'-0" X 3'-0" STAINLESS STEEL ACCESS HATCH
U	2	S.S. 4 1/2" 0-100 PSI PRESSURE GAUGE



PRESSURE GAUGE CONNECTION
N.T.S.



WALL PENETRATION ASSEMBLY DETAIL
N.T.S.



CONTRACTOR SHALL BE REQUIRED TO SUBMIT TO THE ENGINEER DESIGN CALCULATIONS FOR SIZING THE ANTI-FLOTATION PAD, TIE-DOWN BRACKETS, AND THE REINFORCING STEEL REQUIRED FOR THE ANTI-FLOTATION SUB.

WET WELL NOTES:

1. WET WELL SHALL BE EXFILTRATION TESTED (LEAKAGE TESTED) AND PASS TEST BEFORE BACKFILLING. ALL EXFILTRATION TESTS AND STRUCTURE FOUNDATION SHALL MEET NHDOT REQUIREMENTS FOR GRAVEL NHDOT 304.2. EXCAVATED SOIL MAY BE USED IF IT COMPLEIES WITH GRAVEL NHDOT 304.2. BACKFILL AROUND WET WELL AND BENEATH STRUCTURES SHALL BE COMPACTED TO 95 PERCENT IN ACCORDANCE WITH ASTM D1557. CLASS F, FLOWABLE FILL, EXCAVATABLE MAY BE USED. NO ADDITIONAL COMPENSATION WILL BE PAID IF CONTRACTOR ELECS TO USE FLOWABLE FILL.
2. VENTILATION OF THE WET WELL SHALL BE PROVIDED AS SHOWN ON MECHANICAL DRAWINGS.
3. A PERMANENT SIGN SHALL BE ATTACHED ON THE UNDERSIDE OF BOTH THE WET WELL PUMP ACCESS HATCHES (2) AND THE VALVE VAULT ACCESS HATCH (1) WHICH READS "WARNING HAZARDOUS AREA - ENTER ONLY WITH PROPER EQUIPMENT" OR "CONFINED SPACE. ENTRY BY PERMIT ONLY (PER ENV-WQ 705.08)".
4. CONTRACTOR SHALL FOLLOW ALL PUMP MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF THE PUMP. THE PUMP SHALL BE COVER OPENING IS CONFIGURED TO MEET PUMP MANUFACTURER'S REQUIREMENTS FOR PUMP REMOVAL. CONTRACTOR SHALL SUBMIT FULL SHOP DRAWINGS OF THE WET WELL AND PUMP INSTALLATION. SLAB FOR WET WELL ASSUME WATER TABLE OUTSIDE WET WELL SHALL BE AT GRADE AND ASSUME THE WET WELL IS EMPTY.
5. ALL WET WELL AND VAULT PENETRATIONS SHALL BE WATERTIGHT. LEAKAGE TESTING SHALL BE CONDUCTED WITH PIPE PENETRATIONS IN PLACE.

SHAKER LANDING PUMP STATION DESIGN CALCULATIONS:

6 BUILDINGS, 3 UNITS EACH
18 UNITS X 3 BEDS X 150 BED = 8,100 GPD
ADF = 8,100 GPD (24 HRS) (1 HR) = 5.6 GPM
ASSUME PEAKING FACTOR = 6
PEAK FLOW = 5.6 GPM X 6 = 34 GPM
EMERGENCY STORAGE VOLUME = ADF X 6 HRS = 5.6 GPM X 360 MIN = 2,016 GALLONS
4" DIAMETER FORCEMAIN
120 GPM = 3.0 FPS
HIGH POINT = 775.2 FT
PUMP OFF = - 746.7 FT
28.5 FT STATIC
C = 120
H_f = 12.2 FT/1000 FT
LENGTH FORCEMAIN = 315 FT
(12.2 FT/1000 FT) X 315 FT = 3.8 FT FRICTION LOSS
TOTAL DYNAMIC HEAD = 28.5 FT STATIC + 3.8 FT DYNAMIC = 32.3 FT
PUMP DESIGN POINT 120 GPM @ 32 FT TDH

			SHAKER LANDING PUMP STATION – MECHANICAL DETAILS FOR			PATHWAYS CONSULTING, LLC		SCALE: AS SHOWN			
						240 MECHANIC STREET, SUITE 100		DESIGNED BY: ISM			
						LEBANON, NEW HAMPSHIRE 03766		DRAWN BY: CRM			
						(603) 448-2200		CHECKED BY: RJF			
								DATE: 03-01-17			
REVISION NO.			DATE			PROJ. NO. 10068-05			SHEET 28 OF 39		
										28	

FOR BIDDING
MARCH 1, 2017



GENERAL ELECTRICAL NOTES:

1.

12' WIDE CONSTRUCTION ACCESS ROAD SHALL BE CONSTRUCTED AFTER THE PUMP STATION IS CONSTRUCTED. THE CONTRACTOR SHALL LOAM, SEED & MULCH THE ACCESS ROAD TO MATCH EXISTING PEDESTRIAN PATHS TO MATCH EXISTING CONDITIONS.

STA. 0+00
STA. 100+00
EXIST. SMH
RM: 752.1
8" INV. IN: 752.1
8" INV. OUT: 752.9

NEW 8" INV. IN: 775.1
NEW 8" INV. IN: 775.1
RECONSTRUCT BRICK INVERT INCIDENTAL

REMOVE STONEWALL AND WOOD STAIRS TO CONSTRUCT TEMPORARY ACCESS ROAD TO PUMP STATION

8" HDPE DR 11 GRAVITY
S=0.0100
S=0.0100
(SEE SEWER MANHOLE CONNECTION DETAIL, SHEET 32)

FOR BIDDING
MARCH 1, 2017



29

SCALE: AS SHOWN

DESIGNED BY: LC

DRAWN BY: CRM/DPM

CHECKED BY: RJF

DATE: 03-01-17

PROJ. NO. 10068-05

SHEET 29 OF 39

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100

LEBANON, NEW HAMPSHIRE 03766

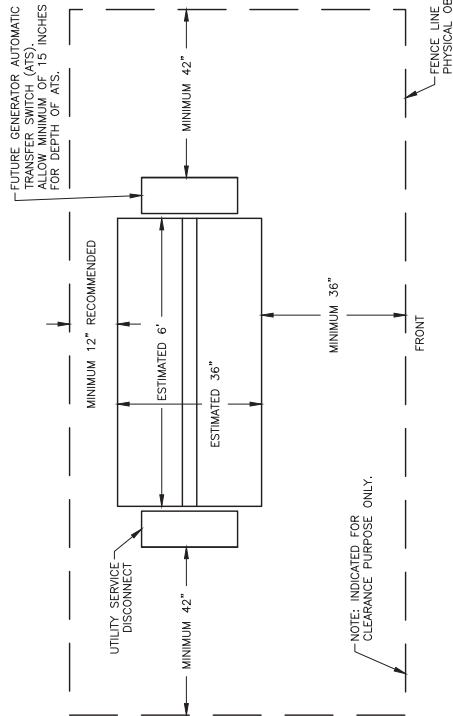
(603) 448-2200

SHAKER LANDING PUMP STATION – ELECTRICAL PLAN AND DETAILS FOR

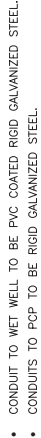
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

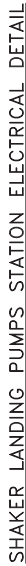
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY



N.T.S



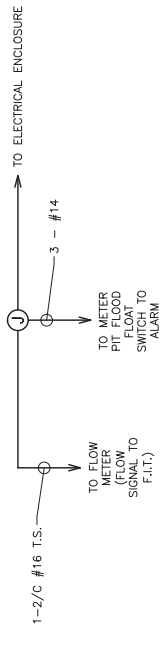
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SHAKER LANDING PUMPS STATION ELECTRICAL DETAIL



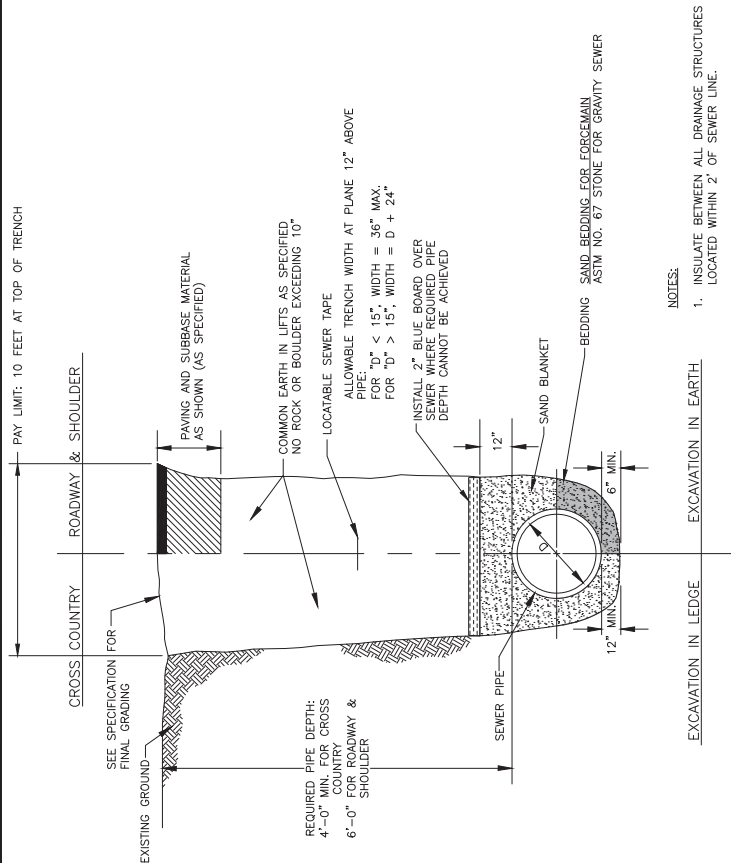
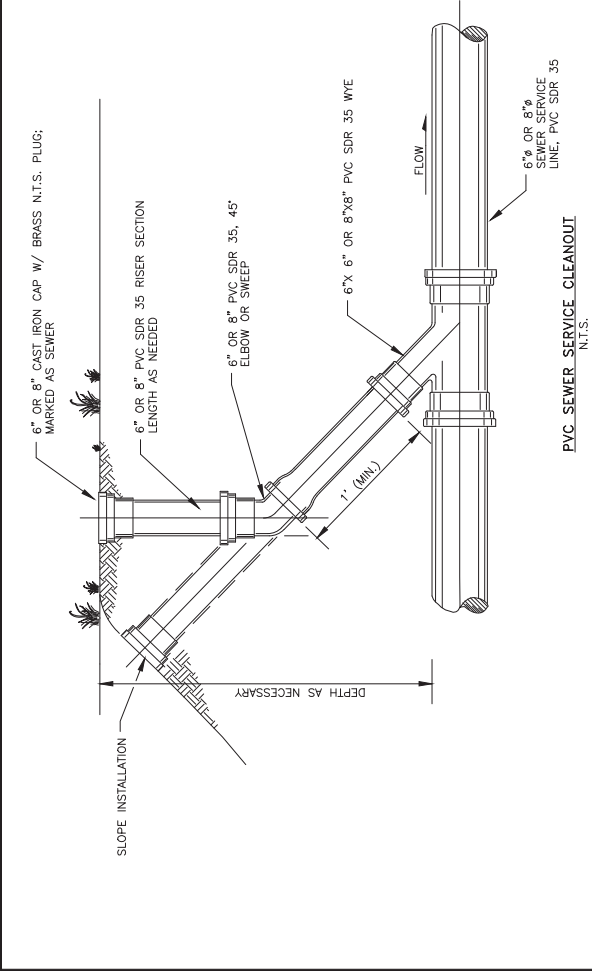
SHAKER LANDING PUMP STATION – ELECTRICAL DETAILS FOR		PATHWAYS CONSULTING, LLC		SCALE: AS SHOWN	
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE		240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200		DESIGNED BY: LC	
				DRAWN BY: DPM	
				CHECKED BY: RJF	
				DATE: 03-01-17	
				PROJ. NO. 10068-05	
				SHEET 30 OF 39	



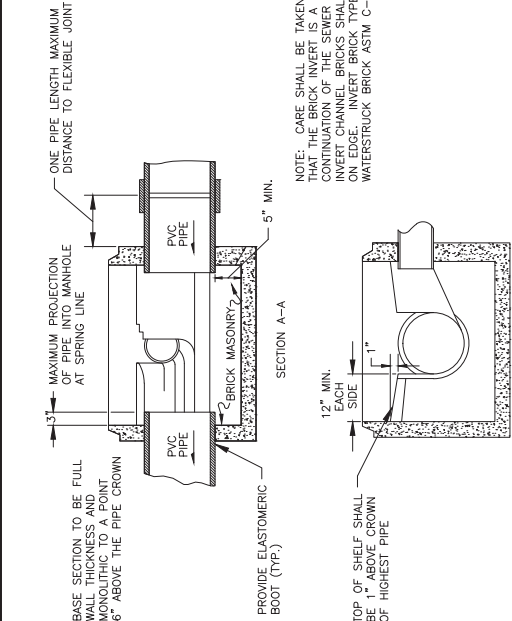
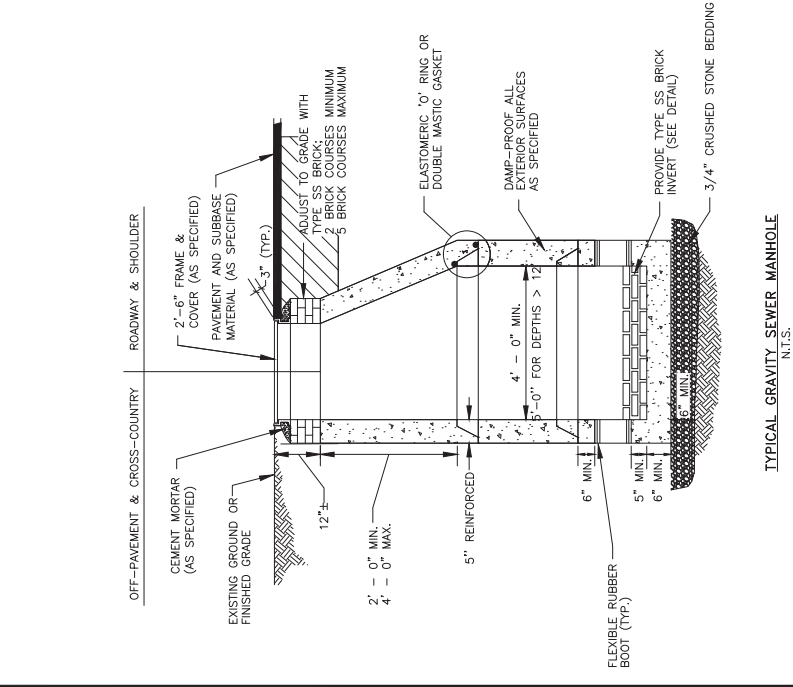
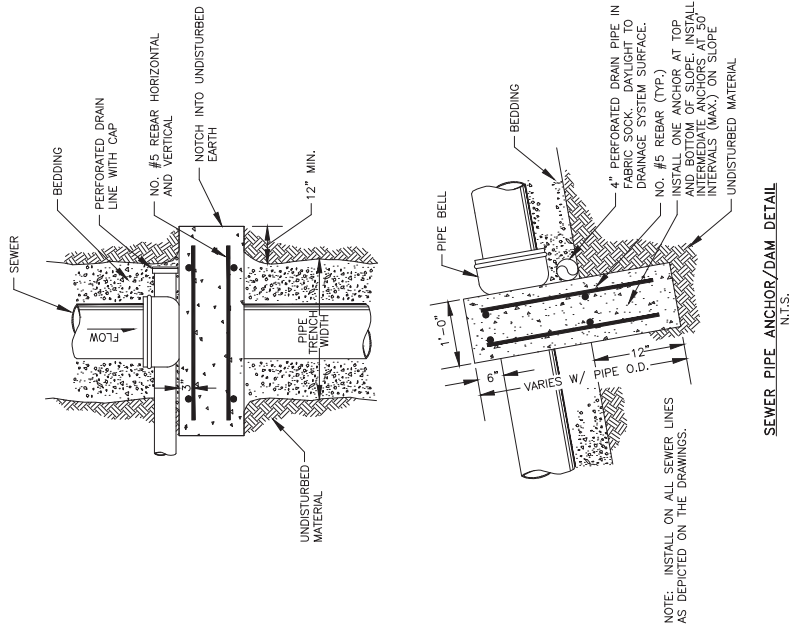
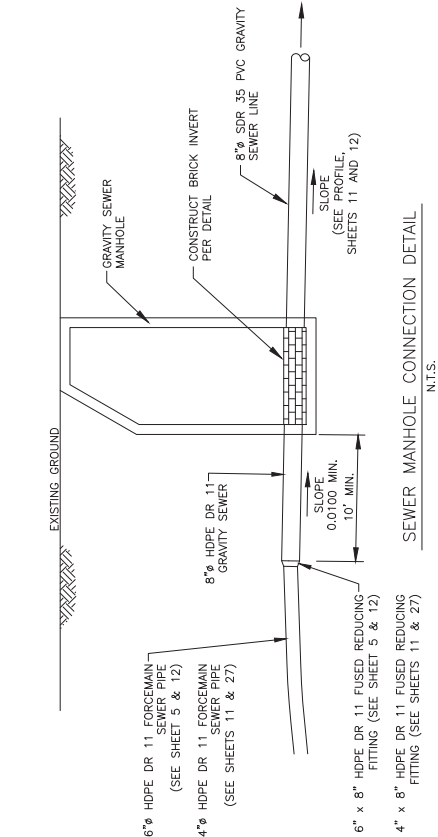
FOR BIDDING
MARCH 1, 2017



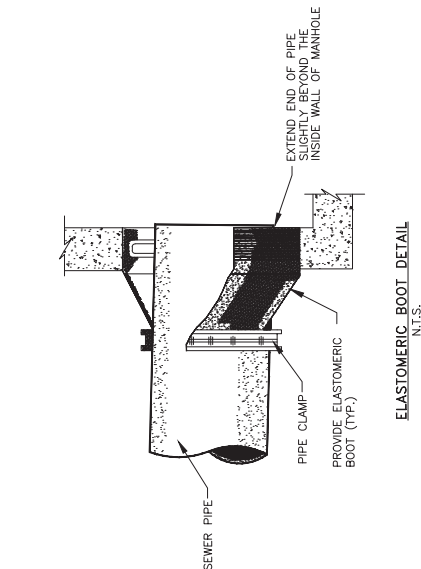
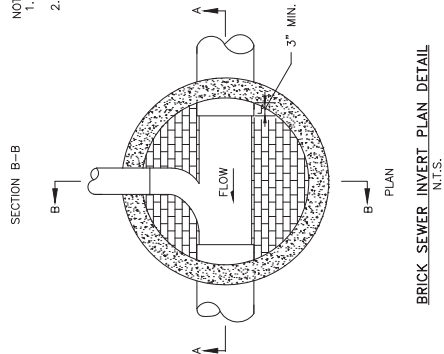
100 AMP M.D. 240/120 VOLT, 1 PHASE, 3 WIRE, 60 HERTZ				
CIRCUIT NO.	NO. POLES	RATING	DESCRIPTION	LOAD
1, 3	2	50*	PCP FEEDER	4.2
2, 4	2	**	SPD	--
5	1	15*	VALVE/METER PIT LIGHTS	0.1
6	1	20	WET WELL VENT FAN	0.72
7	1	20	VALVE/METER PIT VENT FAN	0.72
8	1	20*	VALVE/METER PIT SUMP PUMP	0.9
9	1	20	VALVE/METER PIT RECEPTACLE	0.2
10	1	20	ELECTRICAL ENCLOSURE RECEPTACLE	0.2
11	1	15	ELECTRICAL ENCLOSURE HEATER	0.5
12	1	15*	DIALER	0.3
13	1	15*	FIT	EST. 0.2
14	1	20	FUTURE GENERATOR HEATER	1.5
15	1	15	FUTURE GENERATOR CHARGER	0.5
16-18	1	20	SPARE	
19-20	1	--	SPARE	
* PROVIDE HANDLE LOCK ON CIRCUITS				
** BREAKER RATING PER SPD MANUFACTURER RECOMMENDATION				



OPEN EXCAVATION
SEWER TRENCH DETAIL
N.T.S.

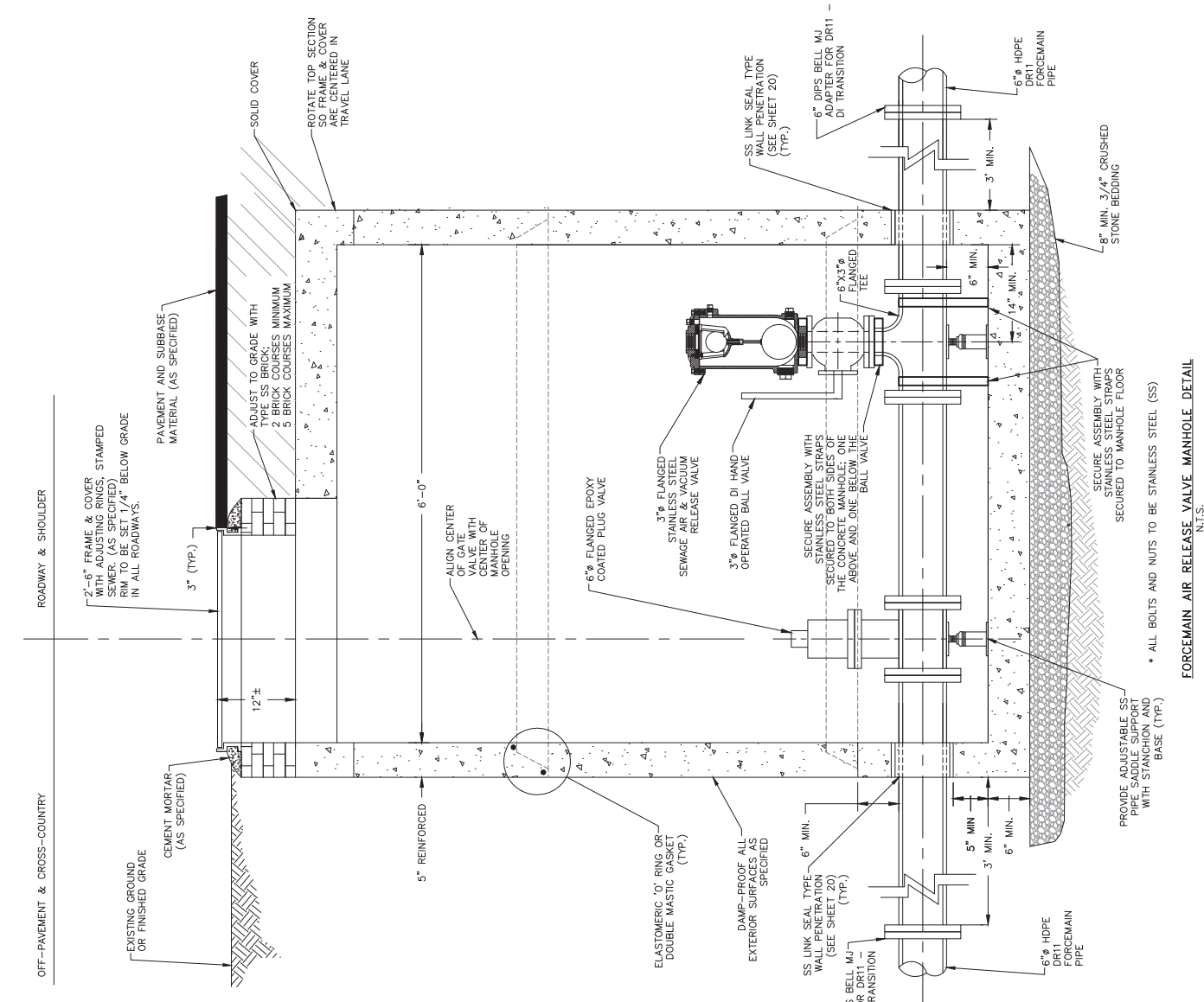
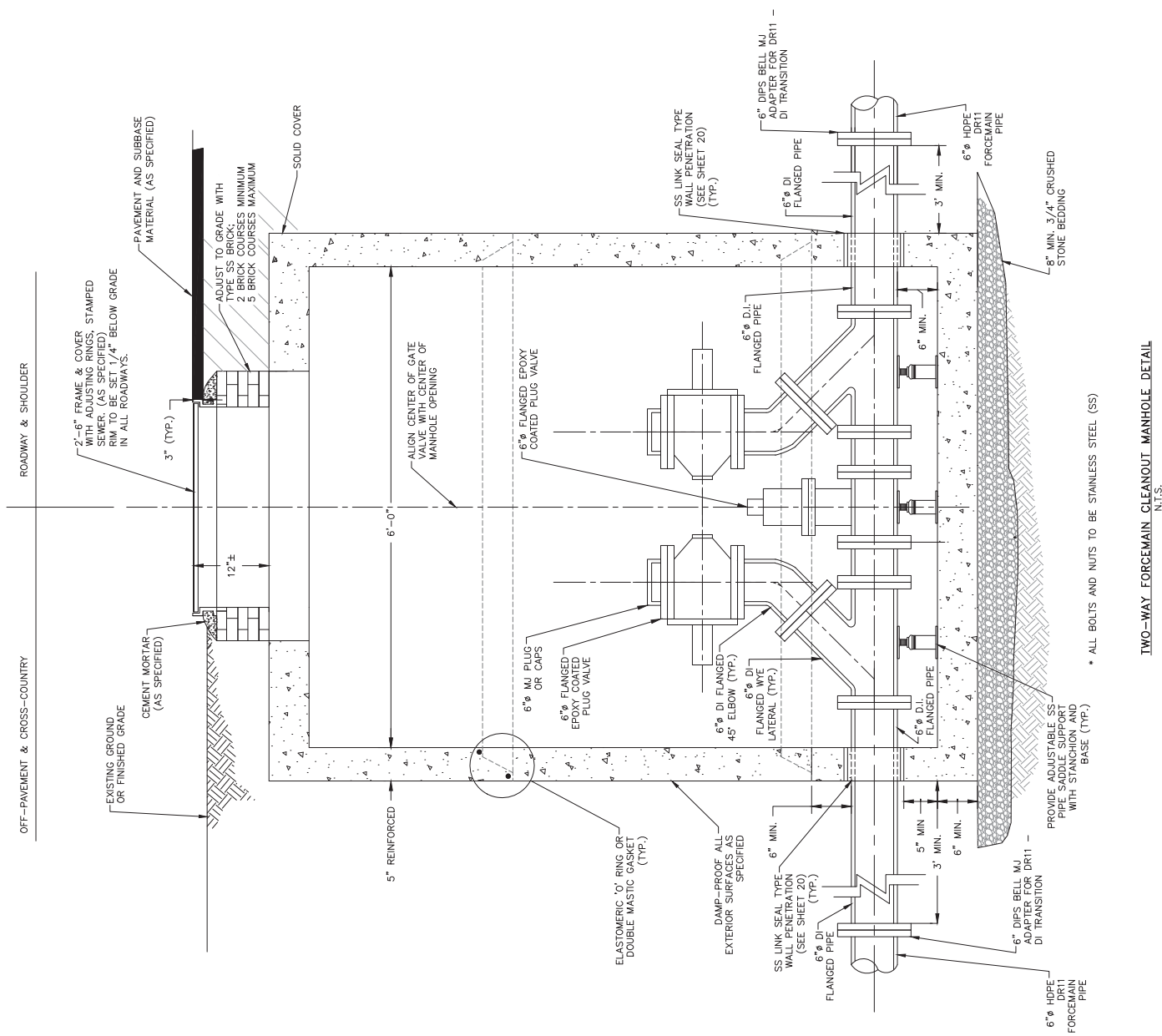


- NOTES:
1. INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST.
 2. LEAKAGE TEST SHALL BE CONDUCTED PRIOR TO BACKFILLING AROUND THE MANHOLE.



FOR BIDDING
MARCH 1, 2017

SEWER DETAILS FOR				TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION				PATHWAYS CONSULTING, LLC				SCALE: AS SHOWN				32			
NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE				240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200				DESIGNED BY: ISM				DRAWN BY: CRM				CHECKED BY: RJF			
																DATE: 03-01-17			
																PROJ. NO. 10068-05			
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY													SHEET 32 OF 39	



TWO-WAY FORCEMAIN CLEANOUT MANHOLE DETAIL
N.T.S.

N.T.S.

FORCEMAIN AIR RELEASE VALVE MANHOLE DETAIL
N.T.S.

N.T.S.



FOR BIDDING
MARCH 1, 2017

[illegible]

SEWER DETAILS FOR

TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION

NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: AS SHOWN

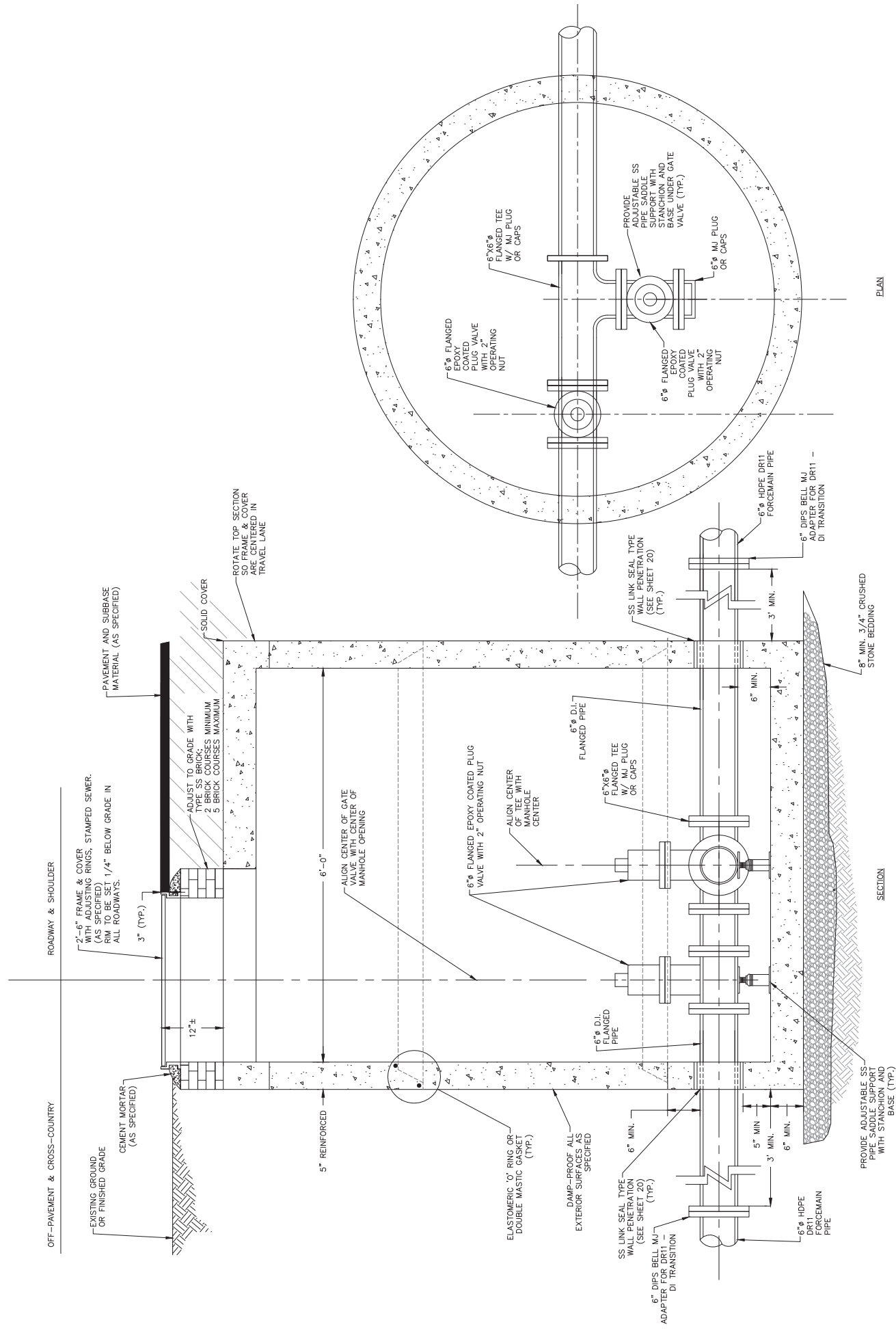
DESIGNED BY: ISM

DRAWN BY: CPM

CHECKED BY: R/JF

DATE: 03-01-17

PROJ NO 10068-05



* ALL BOLTS AND NUTS TO BE STAINLESS STEEL (SS)

FORECEMAIN INTERCONNECTION MANHOLE DETAIL
N.T.S.



FOR BIDDING
MARCH 1, 2017

PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SEWER DETAILS FOR TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

SCALE: AS SHOWN
DESIGNED BY: ISM
DRAWN BY: CRM
CHECKED BY: RJF
DATE: 03-01-17
PROJ. NO. 10068

1. TOP OF TRENCH PAVING LIMITS SHALL BE 4 FEET FROM CENTERLINE OF PIPE, BOTH SIDES, OR 6 FEET FROM THE CENTER OF THE STRUCTURES, ALL SIDES.
2. PAVING LIMIT WITHIN THE IN-DOT RIGHT-OF-WAY SHALL BE LIMITED TO THE CENTER OF THE SOUTHWIND TRAVEL LANE WHERE NO MORE THAN HALF OF THE LANE IS WITHIN THE TRENCH LIMITS. PAYMENT LIMIT WITHIN THE IN-DOT RIGHT-OF-WAY SHALL BE LIMITED TO THE CENTERLINE OF THE TRAVEL LANE. THE IN-DOT RIGHT-OF-WAY SHALL BE LIMITED TO THE CENTERLINE OF THE TRAVEL LANE.
3. A 2-INCH COAT PLANE MILL SHALL BE COMPLETED TO PROVIDE AN OVERLAP JOINT OUTSIDE LIMITS OF MILLING SHALL BE CENTER OF ROADWAY OR CENTER OF TRAVEL LANE, WHICHEVER FALLS WITHIN PAVING LIMITS LISTED HEREIN.



Diagram illustrating the cross-section of a trench structure, showing various layers and materials:

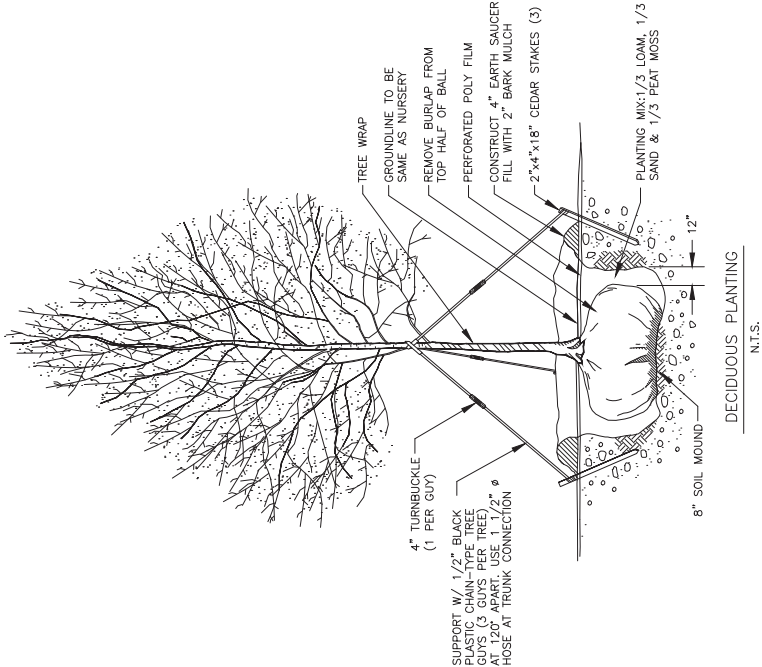
- 10' BIRPS
- 12" STRUCTURES
- TRENCH PAY LIMIT
- SAW CUT LINE
- 5" THICK BITUMINOUS CONCRETE (1" THICK WEARING COURSE, 2" THICK BASE COURSE)
- 6" THICK CRUSHED GRAVEL (NHDOT ITEM 304.3)
- 18" THICK GRAVEL (NHDOT ITEM 304.2)
- 4" THICK 3/4" BULLESTONE HARDPAC/SUREPAC FROM LOCAL SUPPLIER
- 18" THICK GRAVEL (NHDOT ITEM 304.2)

Diagram illustrating the construction of a new travel lane adjacent to an existing pavement structure. The diagram shows the following components and dimensions:

- COLD PLANE OVERLAP JOINT TO 2" MAX. DEPTH, 18" MAX. WIDTH, APPLY TACK COAT ON ALL SURFACES. PAVE WITH WEARING COURSE.** (Pointing to the joint area)
- CENTERLINE OF ROADWAY OR CENTERLINE OF TRAVEL LANE ON NH ROUTE 4A PER PAVING LIMITS NOTES** (Pointing to the centerline)
- SEAL JOINT WITH CRACK SEALANT** (Pointing to the sealant application)
- SEAL JOINT WITH CRACK SEALANT** (Pointing to the sealant application)
- APPLY TACK COAT** (Pointing to the tack coat application)
- EXISTING PAVEMENT** (Pointing to the existing pavement structure)
- TO TRENCHING LIMITS NEW CONSTRUCTION** (Pointing to the new construction area)
- VARIABLES** (Pointing to the variable dimensions)
- THICKNESS AS SPECIFIED OR MATCH EXISTING PAVEMENT** (Pointing to the thickness dimension)
- COMPACTED SUBGRADE** (Pointing to the compacted subgrade)
- SELECT MATERIALS AS DETAILED** (Pointing to the material selection area)



The diagram illustrates the components of a water meter assembly. A horizontal line represents the water flow, with an arrow pointing right labeled "FLOW IN". This line enters a circular "WATER METER". A "WIRE" connects the meter to a small rectangular "TOUCH PAD READER MOUNTED TO BUILDING OR STRUCTURE". The flow continues from the meter into a rectangular "WATER METER WITH HORN". A "DUAL CHECK VALVE BACKFLOW PREVENTER" is located downstream, represented by a square with an 'X' inside. The flow then splits: one path goes up and right, labeled "TO HOT", and the other path continues straight, labeled "TO COLD".

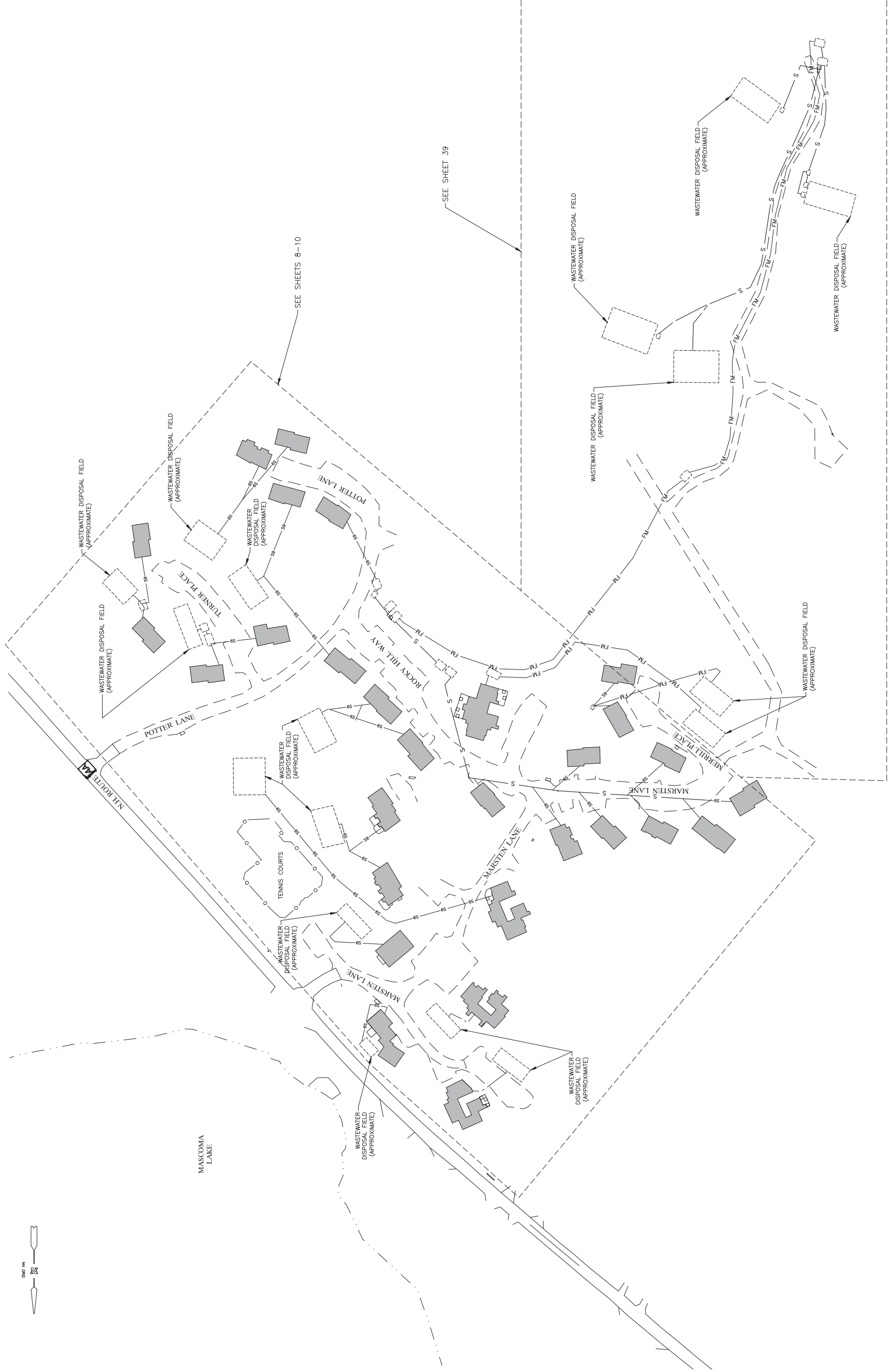
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NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

PROJ. NO. 10068-

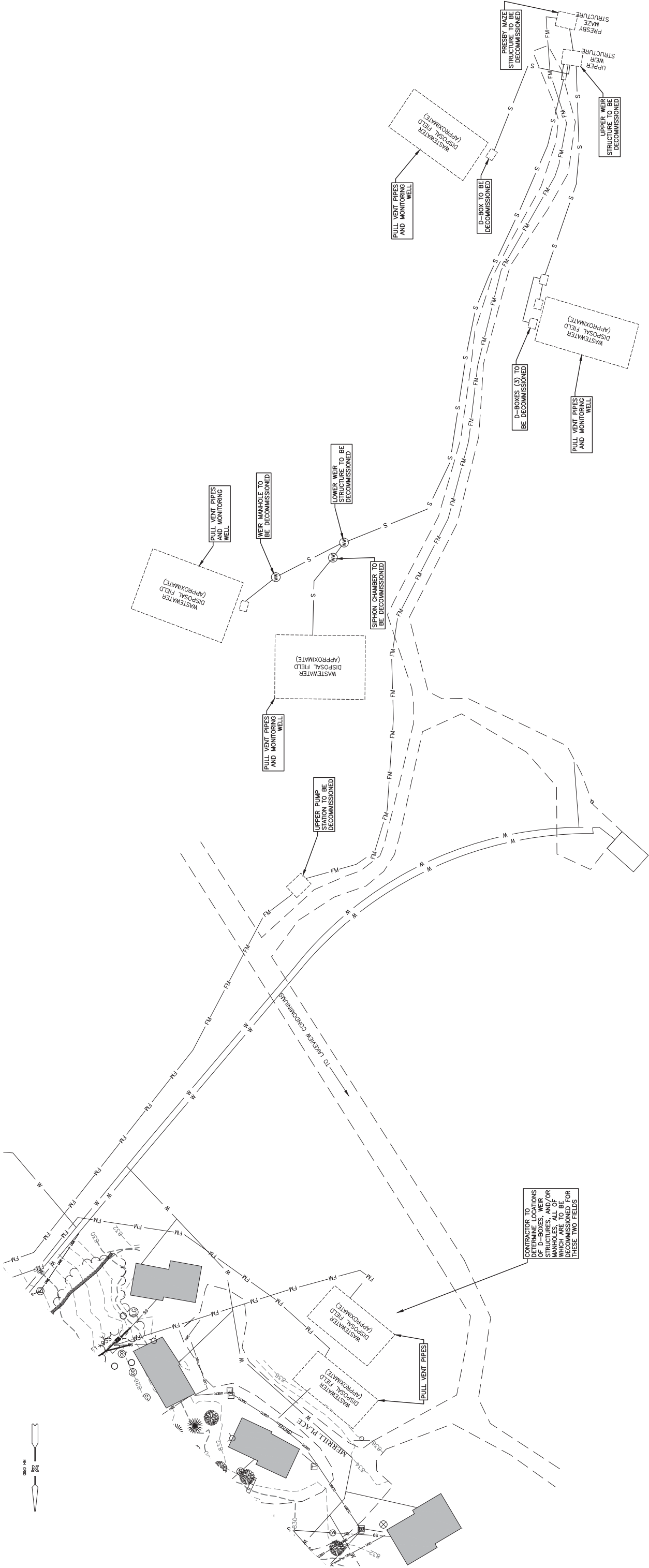
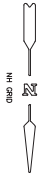
HEET 35 OF 39



1. SEE LAKEVIEW CONDOMINIUMS ON-SITE PLAN SHEETS 8-10 FOR LOWER FIELD DECOMMISSIONING NOTES.
2. SEE LAKEVIEW CONDOMINIUMS UPPER WASTEWATER DISPOSAL FIELDS DECOMMISSIONING PLAN, SHEET 39 FOR UPPER FIELDS DECOMMISSIONING NOTES.

[illegible]

LAKEVIEW CONDOMINIUMS OVERALL EXISTING WASTEWATER DISPOSAL FIELDS PLAN FOR
TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION



- DECOMMISSIONING NOTES:
1. EXISTING UPPER WASTEWATER SYSTEMS TO BE DECOMMISSIONED IN ACCORDANCE WITH NOTES ON SHEET 3.
 2. CONTRACTOR SHALL THOROUGHLY DOCUMENT CONDITION OF GRAVEL ACCESS ROAD AND NEEDED WORK AREAS PRIOR TO STARTING WORK IN THIS LOCATION. CONTRACTOR SHALL DILIGENTLY RESTORE ANY AND ALL DISTURBANCES DUE TO WORK IN THIS AREA TO MEET OR EXCEED PRE-EXISTING DOCUMENTED CONDITIONS AND BE ACCEPTABLE TO THE PROPERTY OWNER.
 3. ALL NECESSARY WORK, MATERIALS, ETC. FOR ACCESS AND RESTORATION OF THESE AREAS ARE INCIDENTAL TO THE CONTRACT.



FOR BIDDING
MARCH 1, 2017



PATHWAYS CONSULTING, LLC				LAKEVIEW CONDOMINIUMS UPPER WASTEWATER DISPOSAL FIELDS DECOMMISSIONING PLAN FOR				TOWN OF ENFIELD - NH ROUTE 4A SEWER EXTENSION				39			
240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200				NH ROUTE 4A, ENFIELD, NEW HAMPSHIRE				SCALE: AS SHOWN				DESIGNED BY: ISM			
												DRAWN BY: DPM/CRM			
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												DATE: 03-01-17			
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												SHEET 39 OF 39			