PROPOSED MULTI-FAMILY DEVELOPMENT

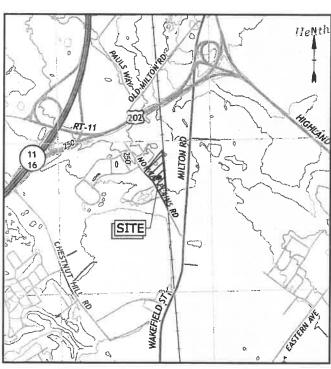
15 NORWAY PLAINS ROAD ROCHESTER, NEW HAMPSHIRE (TAX MAP 215 LOT 17 AND LOT 17-1) SITE PLANS

> SEPTEMBER 6, 2016 (REVISED: JANUARY 13, 2017)



SHEET NO. SHEET TITLE COVER G-001 GENERAL NOTES, LEGEND AND ABBREVIATIONS G-002 EROSION CONTROL NOTES SHEET G-003 PERMITS G-004 NHDES APPROVED SEWER SPECIFICATIONS 1 OF 1 EXISTING CONDITIONS V-101 EXISTING CONDITIONS C-101 SITE PLAN C-102 GRADING PLAN C-103 UTILITIES PLAN C-104 SEWER PLAN AND PROFILE L-101 LANDSCAPE PLAN C-501 DETAILS SHEET C-502 DETAILS SHEET C-503 DETAILS SHEET C-504 DETAILS SHEET C-505 DETAILS SHEET C-506 DETAILS SHEET C-601 ADDRESS PLAN F-101 FIRE TRUCK TURNING PLAN E-101 PHOTOMETRICS PLAN	LIST OF DRAWINGS					
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	C-601	ADDRESS PLAN				
E-101 PHOTOMETRICS PLAN	F-101	FIRE TRUCK TURNING PLAN				
	E-101	PHOTOMETRICS PLAN				

THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT



LOCATION MAP

FINAL APPROVAL BY ROCHESTER PLANNING BOARD

PREPARED BY:

SURVEYOR:

North Easterly Surveying, Inc.

191 State Road, Suite 1 Kittery, ME 03904

PREPARED FOR:

Tenants In Common:

Robert Graham

81 Lakeview Drive

Nottingham, NH

03290

OWNER:

The Estate of Bruce J. Roberts

15 Norway Plains Road Rochester, NH 03868

PERMIT	APPROVAL#
ROCHESTER SITE PLAN REVIEW	215-17-R2-16
ROCHESTER SUBDIVISION	215-17-R2-16
ROCHESTER ZBA	2016-20 & 2016-29
NHDES AoT	AoT-1197
NHDES WASTEWATER CONNECTION	D2016-1106

COMPLETE SET 19 SHEETS

Michael Anderson

Pompano Beach FL

33062-4939

2637 E Atlantic Blvd #172

FOR MORE INFORMATION CONTACT:

THE CITY OF ROCHESTER PLANNING DEPARTMENT AT (603) 335-1338

- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE SURVEYOR OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.

 COORDINATE ALL WORK WITHIN NORWAY PLAINS ROAD WITH THE CITY OF ROCHESTER.

 CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINES AND
- 4. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK CONTRACTOR TO SUBMIT 18-POLED PLANS ON REPRODUCTIBLE PRIVATE AND IN DISTRICTOR THE PROJECT. AS BUILT'S SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER AND CONFORM TO THE CITY OF ROCHESTER STANDARDS.

- ROCHESTER STANDARDS.

 ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISHED GRADE.

 CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.

 SEE NORTH EASTERLY SURVEYING, INC. "EXISTING CONDITIONS PLAN", PREPARED BY NORTH EASTERLY SURVEYING, INC ON JUNE, 22, 2016 FOR BENCHMARK INFORMATION.

 CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL
- HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.
- HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.

 7. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE
 TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME
 SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER,
 AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL, AND
 UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER
- PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES.

 10. ALL MATERIALS AND CONSTRUCTION ACTIVITIES.

 11. ORANGE SNOW FENCE IS TO BE PLACED ALONG THE LIMITS OF CLEARING PRIOR TO ANY ONSITE CUTTING/ACTIVITY.

CONSTRUCTION SCHEDULE:
1. CONSTRUCTION IS ANTICIPATED TO BEGIN IN SPRING 2017 AND BE COMPLETE BY FALL 2019.

- DEMOLITION NOTES:

 1. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS
 OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL
 FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
- 2. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE
- 2. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE UWNER AND APPRUPRIATE UTILITY COMPANY.

 3. UTILITYES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES INCOMPANY STANDARDS. THE CONTRACTOR SHALL VERIEY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.

 4. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 5. SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL
- AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.

 6. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE, ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
- REMOVAL PRIOR TO BID.

 7. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES WITHIN THE WORK LIMITS SHOWN AND CALLED OUT TO BE REMOVED. ITEMS TO BE REMOVED INCLUDE, BUT ARE NOT LIMITED TO: PAVEMENT, PROCESSED ROCK FILL, CATCH BASINS, UNDERGROUND PIPING, SIGNS, TREES, AND SHRUBS. CONTRACTOR SHALL NOTIFY ENGINEER IF THERE ARE EXISTING FEATURES THAT MUST BE REMOVED TO COMPLETE THE WORK BUT ARE NOT CALLED OUT TO BE REMOVED ON THE DEMOLITION PLANS. EXISTING FEATURES CALLED OUT TO BE REMOVED BUT THAT ARE LOCATED CUITSIDE THE LIMIT OF WORK SHALL BE REMOVED BY THE DEVELOPER'S SITE CONTRACTOR.

 8. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL
- LAWS AND REGULATIONS.
- LAWS AND REGULATIONS.

 OCONTACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY BY THE CONTRACTOR, CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO REPLACE IT.

 THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
- 11, SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

- SITE NOTES:

 1. STOP BARS SHALL BE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.

 2. SEE DETAILS SHEETS FOR PAVEMENT MARKINGS, SIGNS, AND SIGN POSTS.

 3. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE WHITE LINES.

- STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE WHITE LINES.
 CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS-1 EMULSION IMMEDIATELY
 PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
 ALL WORK SHALL COMPLY WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD
 SPECIFICATIONS OF RODA AND BRIDGE CONSTRUCTION", CURRENT EDITION.
 ALL SIGNS SHALL CONFORM WITH "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS". AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATES
- 7. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GRADING AND DRAINAGE NOTES:

BELOW PAVED OR CONCRETE AREAS

TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL

BELOW LOAM AND SEED AREAS

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

- 2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL)
- OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.

 CONTRACTOR SHALL PROVIDE A FINISHED PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO

- THE BUILDING.
 ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH 4' SUMPS.
 ALL DRAINAGE PIPE WITH LESS THAN 4' OF COVER SHALL BE INSULATED WITH 2 INCH RIGID FOAM INSULATION.
 CATCHBASINS AND DRAIN MANHOLES SHALL BE 4 FT IN DIAMETER UNLESS OTHERWISE NOTED.
 ALL STORM PORAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NEW HAMPSHIRE DEPARTMENT OF
 TRANSPORTATION (NHDOT) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.

- UTILITY NOTES:
 1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
- 1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.

 SEWER/WATER/DRAINAGE: CITY OF ROCHESTER
 ELECTRIC: EVERSOURCE ENERGY (FORMERLY PSNH)
 TELEPHONE/DATA: METROCAST AND /OR FAIRPOINT

 2. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.

 3. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.

 4. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF ROCHESTER, NEW HAMPSHIRE PUBLICS WORKS DEPARTMENT.

 4. ALL SEWER PIPE SHALL BE PVC SOR 35 UNLESS OTHERWISE STATED.

 5. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF ROCHESTER STANDARDS.

 6. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION,

- AND ALL APPLICABLE STATE AND LOCAL CODES.
- ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

 THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANNOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES,

 AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF

 UTILITIES COMPLETE AND OPERATIONAL.

 A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND

 SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT

 ALL MATERIA AND TANK SEMINE CONCESTING.
- ALL WATER/SANITARY SEWER CROSSINGS.
- 10. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF ROCHESTER.

 11. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF ROCHESTER.

 12. ALL SEWER PIPE WITH LESS THAN 4' OF COVER IN UNPAYED AREAS AND LESS THAN 6' OF COVER IN PAYED AREAS
- SHALL BE INSULATED.
- 13. CONTRACTOR SHALL COORDINATE ALL FLECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION. MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFOR CONSTRUCTION WITH EVERSOURCE AND FAIRPOINT COMMUNICATIONS.

LANDSCAPE NOTES:

- 1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS IN QUANTITIES AS SHOWN ON THIS PLAN, NO
- SUBSTITUTIONS WILL BE PERMITTED UNLESS APPROVED BY OWNER. ALL PLANTS SHALL BE NURSERY GROWN.

 2. ALL PLANTS SHALL BE NURSERY GROWN AND PLANTS AND WORMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, INCLUDING BUT NOT LIMITED TO SIZE, HEALTH, SHAPE, ETC., AND SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO ARRIVAL ON-SITE AND AFTER
- 3. PLANT STOCK SHALL BE GROWN WITHIN THE HARDINESS ZONES 4 THRU 7 ESTABLISHED BY THE PLANT HARDINESS ZONE MAP, MISCELLANEOUS PUBLICATIONS NO. 814, AGRICULTURAL RESEARCH SERVICE, UNITED STATES DEPARTMENT AGRICULTURE, LATEST REVISION.
- PLANT MATERIAL SHALL BARE THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE
- 5. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE PROVIDED IN THE PLANT LIST OR ON THE PLANT IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LABEL AND THE NUMBER OF SYMBOLS SHOWN ON THE DRAWINGS, THE GREATER NUMBER SHALL APPLY.
- 5. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE
- 7. THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL IMMEDIATELY BE REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
- B. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE SIX (6) INCHES OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
- 9. THREE (3) INCH BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS TO BE USED IN A CURBED ISLAND THE BARK MULCH SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE SIX (6) INCHES OF LOAM AND SEED.
- 10, LANDSCAPING SHALL BE LOCATED WITHIN 150 FT OF EXTERIOR HOSE ATTACHMENT OR SHALL BE PROVIDED WITH AN
- 11. SEE PLANTING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 12. TREE STAKES SHALL REMAIN IN PLACE FOR NO LESS THAN 6 MONTHS AND NO MORE THAN 1 YEAR.

 13. PLANTING SHALL BE COMPLETED FROM APRIL 15TH THROUGH OCTOBER 1ST. NO PLANTING DURING JULY AND AUGUST UNLESS SPECIAL PROVISIONS ARE MADE FOR DROUGHT.
- 14. PARKING AREA PLANTED ISLANDS TO HAVE MINIMUM OF 1'-0" TOPSOIL PLACED TO WITHIN 3 INCHES OF THE TOP OF CURB ELEVATION. REMOVE ALL CONSTRUCTION DEBRIS BEFORE PLACING TOPSOIL.
- 15. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 TREES. SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
- 16. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING, ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON.
- 17. EXISTING TREES AND SHRUBS SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES AND SHRUBS SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK. ANY EXISTING TREE OR SHRUB SHOWN TO REMAIN, WHICH IS REMOVED DURING CONSTRUCTION, SHALL BE REPLACED BY A TREE OF COMPARABLE SIZE AND SPECIES
- 18. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF (1) YEAR BEGINNING AT THE DATE OF ACCEPTANCE OF SUBSTANTIAL COMPLETION. ALL RASSES, TREES AND SHRUBS THAT, IN THE OPINION OF THE LANDSCAPE ARCHITECT, SHOW LESS THAN 80% HEALTHY GROWTH AT THE END OF ONE YEAR PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
- 19. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT
- 20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
- 21. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED IT MAY BE NECESSARY TO PRE-DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATE:

			EXISTING	G DRAINA	AGE AND	SEWER S	TRUCTUE	RE TABLE			
		S.M.H. #1	S.M.H. #2	S.M.H. #3	S.M.H. #4	S.M.H. #5	C.B. #1	C.B. #2	C.B. #3	C.B. #4	C.B. #5
SI	ZE	32" DIA.	32" DIA	32" DIA	32° DIA	32" DIA	24" DIA.	22"X24"	24" DIA.	24°X24"	22"X24"
RIM ELE	VATION	246.95	244.20'	240,80	238.60*	239.85'	240.45	239.55'	239.15'	238.05'	237.25
50	MP	239.75'	237,40'	233.95'	232.00	230.95'	237.90'	235.50'	235.00'	234.60'	233,45'
	INVERT	239.80'	237.55'	234,00'	232,00'	231.10'	238.70	237,20'	236.80'	236.201	235.65
PIPE "A"	TYPE	10° P.V.C.	10" P.V.C.	10" P.V.C.	10" P.V.C.	12" P.V.C.	12" C.P.P.	12" C.M.P.	12" C.P.P.	12" C.P.P.	14" R.C.P
	INVERT	239.75	237.40	233.95	232.00"	230.95	238.60*	237.45'	236.60*	236.301	
PIPE "B"	TYPE	10" P.V.C.	10" P.V.C.	10" P.V.C.	12" P.V.C.	12" P.V.C.	12" C.M.P.	12" C.P.P.	12ª C.P.P.	12" C.P.P.	
PIPE "C"	INVERT	239.80'			232.00						
	TYPE	10" P.V.C.			10" P.V.C.						

SOIL DELINEATION NOTES:

A SITE SPECIFIC SOIL SURVEY WAS PREPARED ON JUNE 29, 2016, BY JAMES P. GOVE, CSS # 004, GOVE ENVIRONMENTAL

SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE

THE SOIL DELINEATION WAS CONDUCTED WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR INFILTRATION REQUIREMENTS BY THE NHDES ALTERATION OF TERRAIN BUREAU. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE. A REPORT HAS BEEN PREPARED THAT ACCOMPANIES THIS SOILS DELINEATION.

SOIL LEGEND		
MAP UNIT SYMBOL	MAP UNIT NAME	HYDROLOGIC SOIL GROUP
89	CHATFIELD, FINE SANDY LOAM	В
444	NEWFIELDS, FINE SANDY LOAM	В
500	UDORTHENTS, LOAMY	B (ESTIMATED)
546/P	WALPOLE, FINE SANDY LOAM	D (ESTIMATED)
600/P	ENDOAQUENTS, LOAMY	D (ESTIMATED)

DRAINAGE: POORLY DRAINED = /P

TEST PIT	DATA				
		ENVIRONMENT	AL SERVICES ON	5/17/16. TEST PITS	WERE LOGGED BY JIM GOVE AN
VIEWED BY F	OBERT GRAHAM OF	EKIMBOR, LLC.		.,,	
TEST PIT #:					
DEPTH	COLOR	TEXTURE	STRUCTURE		REDOX FEATURES
0-12"	10YR3/2	LS	GR	FR	
12-24"	10YR5/4	LS	GR	FR	
24-50"	2.5Y5/3	5	SG	L	7.5YR5/6 C/P
REFUSAL AT	50", ESHWT AT 2	4", OBSERVED	WATER 42"		
TEST PIT #2					
DEPTH	COLOR	TEXTURE	STRUCTURE		REDOX FEATURES
0-6"	10YR3/2	FSL.	GR	FR	
6-22"	10YR4/6	FSL	GR	FR	
22-55"	2.5Y5/3	LS	OM	FR	7.5YR5/6 C/P
REFUSAL AT	'55", ESHWT AT 2	z", observed	WATER 50"		
TEST PIT #3					
DEPTH	COLOR	TEXTURE			REDOX FEATURES
0-9"	10YR3/2	LS	GR	FR	
9-23"	10YRS/4	LS	GR	FR	
23-67" REFUSAL AT	2.5Y5/3 50", ESHWT AT 23	FSL 1". OBSERVED	OM WATER - NONE.	FI RESTRICTIVE LAY	5YR5/6 C/P ER AT 23"
		,			
TEST PIT #4 DEPTH	COLOR	TEXTURE	STRUCTURE	CONCICTENCE	REDOX FEATURES
0-12"	10YR3/2	FSL	GR	FR	REDUX FEATURES
12-19"	2.5Y6/2	FSL	GR	FR	
19-23"	10YR4/6	FSL	GR	FR	
23-68"	2.5y5/3	FSL	QM	FI	5YR5/5 C/P
	68", ESHWT AT 23				
TEST PIT #5					
DEPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0-9"	10YR3/2	FSL	GR	FR	
9-33"	10YR4/6	FSL	GR	FR	
33"	BEDROCK				
REFUSAL AT	33", ESHWT AT 33	3"			
TEST PIT #6	i				
DEPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0-6"	10YR3/2	FSL	GR	FR	
5-35"	10YR4/5	F\$L	GR	FR	
35"	BEDROCK				
REFUSAL AT	35", ESHWT AT 35	i*			
	COLOR	TEXTURE	STRUCTURE		E REDOX FEATURES
DEPTH					
DEPTH 0-4"	10YR3/2	FSL	GR	FR	
<u>TEST PIT #7</u> DEPTH 0-4" 4-28" 28-52"			GR GR OM	FR FR FI	7.5YR5/6 C/P

REI OGAL A	T 35", ESHWT AT 3	15			
TEST PIT #	7				
DEPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATU
0-4"	10YR3/2	FSL	GR	FR	
4-28"	10YR4/6	FSL	GR	FR	
ZB-52"	2.5Y5/3	LS	OM	FI	7.5YR5/6
REFUSAL A	T 52", ESHWT AT 2	8°, OBSERVED V	WATER - NONE,	RESTRICTIVE LAYE	R AT 28"
TEST PIT #	8				
DEPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0.148	1040424	CIND	N. C.	FRIARIC	MONE

DEPTH	COLOR	TEVENING	CTOLUCT IDE	CONCICTENCE	DEDOM FRATIONS
		TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0-14"	10YR4/4	SAND	MASSIVE	FRIABLE	NONE
14-26"	10YR4/6	L, SAND	MASSIVE	FRIABLE	NONE
26-30"	2.5Y5/3	L. SAND	MASSIVE	FRIABLE	7.5YR5/6, 5%
30+"	REFUSAL				
REFUSAL AT	30", ESHWT AT 26"				
TECT OF #0					

TEST PIT #9					
DEPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0-20"	10YR3/3	GR. SAND	MASSIVE	FRIABLE	NONE
20-24"	10YR3/2	F.S.LOAM	GRANULAR	FRIABLE	NONE
24-30"	10YR5/6	F.S.LOAM	GRANULAR	FRIABLE	NONE
30-63"	2.5Y5/3	L. SAND	MASSIVE	FRIABLE	7.5YR4/6, 10%
63+*	REFUSAL				
REFUSAL AT 63	". ESHWT AT 30"				

T	EST PIT #10					
D	EPTH	COLOR	TEXTURE	STRUCTURE	CONSISTENCE	REDOX FEATURES
0	-12"	10YR4/4	GR. SAND	MASSIVE	FRIABLE	NONE
1	2-27"	10YR5/6	L. SAND	MASSIVE	FRIABLE	NONE
2	7-32°	10YR6/2	L. SAND	MASSIVE	FRIABLE	7.5YR4/6, 10%
3	2-33°	10YR2/1	SAND	MASSIVE	VERY FIRM	7.5YR4/6, 10%
3	3-87"	10YR4/3	SAND	MASSIVE	FRIABLE	7.5YR4/6, 10%
8	7+"	REFUSAL				
R	EFUSAL AT 87"	ESHWT AT 27"				

EXISTING PROPERTY LINE

BROBOSED GAS LINE

PROPOSED RIP RAP

LEGEND

	PROPOSED PROPERTY LINE
	WETLAND LINE
~~~~~	TREELINE
minoral sames manage	EXISTING STONEWALL
V/	EXISTING WATER LINE
PW	PROPOSED WATER LINE
	EXISTING SEWER LINE
ss	PROPOSED SANITARY SEWER LINE
were the residual form and the $C_{\nu}^{\nu}$ , and the residual residual residual $\nu$	EXISTING OVERHEAD ELECTRIC
	PROPOSED OVERHEAD ELECTRIC
PEAC PEAC	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED TRANSFORMER
	1 FT CONTOUR
250	5 FT CONTOUR
248	PROPOSED GRADE
and the same of th	EXISTING DRAIN LINE
	PROPOSED DRAIN LINE

250	5 FT CONTOUR
248	PROPOSED GRADE
	EXISTING DRAIN LINE
	PROPOSED DRAIN LINE
~ <del>************************************</del>	PROPOSED PIPE WITH 2 INCH RIGIO FOAM INSULATION
	DEDIMETER CONTROL BARDIER

PROPOSED GAS LINE
PROPOSED STABILIZED CONSTRUCTION LOCATION
LIMIT OF CLEARING AND

TEST PIT (SEE ABOVE) EXISTING SANITARY SEWER MANHOLE PROPOSED SANITARY SEWER MANHOLE 0 200 PROPOSED SPOT GRADE PROPOSED FINISHED FLOOR ELEVATION EXISTING CATCH BASIN PROPOSED CATCH BASIN EXISTING DRAIN MANHOLE PROPOSED DRAIN MANHOLE PROPOSED UNDERGROUND PROPANE TANK PROPOSED SIGN PROPOSED LIGHT Ö INLET PROTECTION BARRIER EXISTING UTILITY POLE PROPOSED UTILITY POLE EXISTING FIRE HYDRANT PROPOSED FIRE HYDRANT **EXISTING WATER VALVE** PROPOSED WATER VALVE







# Proposed **Multi-family** Development

### Norway Plains Road Site Plans

Tenants In Common: Robert Graham 81 Lakeview Drive Nottingham, NH 03290

Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

### Rochester, New Hampshire

1.	12/16/16	RESPONSE TO CITY COMM
A	10/11/2016	City Review Comments
MARK	DATE	DESCRIPTION
PROJE	CT NO:	G-0693
DATE:	09/06/2016	
FILE:	G0693-G-001	_GENERAL-NOTES.dwg
DRAWI	N BY:	ERC/KAM
CHECK	ED:	KAM

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SCALE:

G-001

43°-19'-28"N

DESCRIPTION
THE PROJECT CONSISTS OF THE CONSTRUCTION OF A RESIDENTIAL DEVELOPMENT WITH ASSOCIATED PARKING, ROAD, DRAINAGE, UTILITIES, AND LANDSCAPING CONSISTENT WITH THE CITY OF ROCHESTER'S MASTER PLAN

DISTURBED AREA TO BE DISTURBED IS APPROXIMATELY  $\pm 4.1$  ACRES.

SOIL CHARACTERISTICS BASED ON SITE SPECIFIC SOIL SURVEY CONDUCTED BY NHSC, INC. THE SITE CONSISTS OF WELL TO POORLY DRAINED SOILS WITH HYDROLOGIC SOIL GROUPS B, C, AND D.

NAME OF RECEIVING WATERS
THE STORM WATER RUNOFF WILL BE DISCHARGED VIA OVERLAND FLOW TO UNNAMED WETLAND WHICH ULTIMATELY FLOWS TO

- SENCE OF MAJOR ACTIVITIES

  ORANGE SNOW FENCE IS TO BE PLACED ALONG THE LIMITS OF CLEARING PRIOR TO ANY ONSITE CUTTING/ACTIVITY. CUT AND CLEAR TREES.
- CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION
- SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THA INFLUENCE STORMWATER RUNOFF SUCH AS:

  NEW CONSTRUCTION

  DEVELOPMENT OF BORROW PIT AREAS

- DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE FLOOD PLAIN EXCAVATION WORK

- CONSTRUCTION OF ACCESS AND HAUL ROAD
- CONSTRUCTION OF ACCESS AND HADE ROAD
   NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
   CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
   LL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM,

- CLEAR AND DISPOSE OF DEBRIS.
  CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
- GRADE AND GRAVEL ROADWAYS AND PARKING AREAS ALL ROADS AND PARKING AREA SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.

  BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING, ALL CUT AND FILL SLOPES HALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.

- FINISH PAYING ALL ROADWAYS AND PARKING LOTS.
  INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
  COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION

NOTE: THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.

- EROSION CONTROL NOTES

  1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NITDES.

  2. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALE, SILT FENCES, SILT SACKS AND SILT SOCKS, AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
- SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
- WORK CIPIL'S AND SE MAINTAINED FOR THE DURATION OF THE PROJECT.

  PERIMETER CONTROLS INCLUDING SILT FENCES, HAY BALE BARRIERS, AND/OR SILT SOCKS SHALL MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.

  THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON
- COMPLETION OF CONSTRUCTION.

  ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6° LOAM, SEED, AND FERTILIZER.

  INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER, REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.

  CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

- STABILIZATION

  1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:

  A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.

  B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.

  C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

  WINTER STABILIZATION PRACTICES:

  A. ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAY, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECLIRED WITH ANCHOR NETTING, ELSEWHERE.

  8. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITION.

  C. AFTER NOVEMBER 15TH, INCOMPLETE ROAD SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHOOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

  STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:

- TEMPORARY SEEDING MULCHING
- B. MULCHING
  WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS
  OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE
  CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN ITHESE AREAS, SILT FENCES AND HAY BALE BARRIERS AND ANY
  EARTH-DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
  DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED
  CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH HAY BALE BARRIERS AND SILT
  FENCES OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH
  PRACKS. THE SITE SHALL BE STABILIZED FOR THE WINTERS BY NOVEMBERS 15.
- RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.

- DUST CONTROL:

  1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.

  2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS INCLUDING BUT NOT LIMITED TO ROUTE 11 (FARMINGTON ROAD).

- STOCKPILES

  1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.

  2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF
- PRECIPITATION.
  PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED
- AT THE END OF EACH WORKING DAY,
  PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS
  BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE

<u>OFF SITE VEHICLE TRACKING</u> THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION
1. TEMPORARY GRASS COVER

- PORANT GRADS COVER.

  SEEDBED PREPARATION:
  APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE.
- UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED, APLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER), HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE, SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING,
- TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY YEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS,

  - GETATIVE PRACTICE
    FOR PERMANENT MEASURES AND PLANTINGS.

    1. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER
    ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5.
    FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER
    APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

    3. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE
    THOROUGHLY WORKED INTO THE LOAM, LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED,
    SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND
    GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF
    WIDTH.
  - WIGHT.

    SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY,
    PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN, IMMEDIATELY BEFORE
    SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE MALE THE SEED SHALL BE SOWN IN ONE DIRECTION AND
    THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POLINDS PER
- IO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A PAND ROLLER WEIGHING NOT OVER 100 FM LINEAR FOOT OF WIDTH. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY
- COVERED WITH GRASS SHALL BE RESERBED, AND ALL NOXIOUS WEEDS REMOVED.
  THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED.
  A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE
  INDICATED RATE:

CREEPING RED FESCUE 50 LBS/ACRE

KENTUCKY BLUEGRASS
100 LBS/ACRE
PERRENIAL RYE GRASS
IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT, ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS, SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE

DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL)
FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT
TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR

- DISPATCH FACILITY.

  IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO
- HANDLE ANTICIPATED WASHOUT WATER.
- HANDLE ANTICIPATED WASHOUT WATER.
  CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND
  SURFACE WATERS OR DELINEATED WETLANDS.
  INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE

## ALLOWABLE NON-STORMWATER DISCHARGES 1. DISCHARGES FROM FIRE-FIGHTING ACTIVITIES

- FIRE HYDRANT FLUSHINGS
  WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
- WATER USED TO CONTROL DUST POTABLE WATER INC. UNCONTAMINATED WATER LINE FLUSHINGS
- ROUTINE EXTERNAL BUILDING WASH DOWN -NO DETERGENTS
  PAVEMENT WASH WATERS -NO SPILLS OR DETERGENTS
  UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATE
  UNCONTAMINATED GROUND WATER OR SPRING WATER
- FOUNDATION OR FOOTING DRAINS -NOT CONTAMINATED
- UNCONTAMINATED EXCAVATION DEWATERING
  LANDSCAPE IRRIGATION

# WASTE DISPOSAL 1. WASTE MATERIALS

- ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.

  ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE
- SUPERINTENDENT.
- HAZARDOUS WASTE ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER, SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
- ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR
- SPILL PREVENTION

  1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES
- OUTLINED BELOW.
  THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:

  A. GOOD HOUSEKEEPING:
  THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ON SITE
- THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ON SITE
  DURING THE CONSTRUCTION PROJECT:

  1. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE.

  2. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER
  (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.

  3. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED,

  4. THE SITE SUPERINTENDENT SHALL INSPECT DALLY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS,

  5. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER,

  6. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER,

  HAZARDOILS PRODUCTS:
- THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

  1. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE,
- ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.

  3. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.

  PRODUCT SPECIFICATION PRACTICES
- THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE: PETROLEUM PRODUCTS:
- ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE.
  PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCOUNT MANUFACTURER'S RECOMMENDATIONS.

- FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE
- ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER, STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS, THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

- ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE.

  EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM.

  EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
- SPILL CONTROL PRACTICES
- SPILL CONTROL PRACTICES
  IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS
  SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP;

  1. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE
  PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND
  CLEANUR CLIPPLY RECOMMENDED.
- CLEANUP SUPPLIES.

  MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE
  AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS,
  MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
- CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
  ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
  THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE
  CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
  SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR
  EFERDAL ASSOCIES AS GROUPED S.
- FEDERAL AGENCIES AS REQUIRED. FEDERAL AGENCIES AS REQUIRED. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL
- PREVENTION AND CLEANUP COORDINATOR.

  VEHICLE FUELING AND MAINTENANCE PRACTICE:

  CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPTMENT/VEHICAL FUELING AND MAINTENANCE AT

- AN OFF-SITE FACILITY.

  CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY.

  IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED.

  CONTRACTOR SHALL KEEP A SPILL KIT AT THE PUELING AND MAINTENANCE AREA.

  CONTRACTOR SHALL VEHICLES SHALL BE INSPECTED REGULARLY FOR LEAKS AND DAMAGE.

  CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES
THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY
THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP

- THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF
- THE POLLOWING REPRESENTS THE GENERAL SERVICE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER.

  2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE
- A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR
- ACTIVITIES.

  IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

- BLASTING NOTES

  IF MORE THAN 5000 CUBIC YARDS ARE TO BE BLASTED A BLASTING PLAN SHALL BE PROVIDED, BLASTING PLAN SHALL INCLUDE:

  A. LOCATION AND IDENTIFICATION OF DRINKING WATER WELLS LOCATED WITHIN 2000 FEET OF THE PROPOSED

  BLASTING ACTIVITIES.

  8. A GROUNDWATER QUALITY SAMPLING PROGRAM, APPROVED BY NHDES PRIOR TO INITIATING BLASTING, TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA.

  1. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.

  2. THE FOLLOWING BEST MANAGEMENT PROCEDURES FOR BLASTING SHALL BE COMPLIED WITH:
  - LOADING PRACTICES.
  - C. LOADING PRACTICES.

    THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:

    1. DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER.

    THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK
    ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS.

    2. EXPLOSIVE PRODUCTS SHALL BE MANAGED ON-SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE,

  - EXPLOSIVE PRODUCTS SHALL BE MANAGED ON-SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE RETURNED TO THE DELIVERY VEHICLE, OR PLACED IN SECURE CONTAINERS FOR OFF-SITE DISPOSAL SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL.

    LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT
  - DETONATION SHOULD BE POSTPONED.
  - DEFINATION STOUDD BE POSTPORED.

    LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT, EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO
- D. EXPLOSIVE SELECTION
  THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
- EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST
- EXECUTION.

  2. EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER.

  PREVENTION OF MISFIRES. APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT
- MUCK PILE MANAGEMENT
- F. MUCK PILE MANAGEMENT

  MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE

  POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:

  1. REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.

  2. MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF

  WATER SUPPLY WELLS OR SURFACE WATER.

  G. SPILL PREVENTION MEASURES AND SPILL MITIGATION

  SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND

  OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM;

  1. THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:
- THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:
- STORAGE OF REGULATED SUBSTANCES ON AN IMPERVIOUS SURFACE; SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY; LABEL REGULATED CONTAINERS CLEARLY AND VISIBLY;
- INSPECT STORAGE AREAS WEEKLY:
- COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
  WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC

- FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS; AND

  SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TRANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.

  THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:

  EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;

  PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;

  C. HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;

  USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES; AND

  PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.

  THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.

  PUBLING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WO-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR PUBLING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING AND UNDERVIEW TO TIS SUCCESSOR DOCUMENT, ISEE HTTP://DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF)







# Proposed **Multi-family** Development

### Norway Plains Road Site Plans

Tenents In Common: Robert Graham 81 Lakeview Drive Nottingham, NH 03290

# Rochester, New Hampshire

Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

1. 12/16/16 RESPONSE TO CITY COMMENTS A 10/11/2016 City Review Com MARK DATE DESCRIPTION PROJECT NO: DATE: 09/06/2016 LE: G0693-G-002 ERC/KAM CHECKED: ROVED:

**EROSION CONTROL NOTES** 

AS SHOWN

G-002

SCALE:

Re: Site plan to construct 10 4-unit townhomes and one duplex. Cases 215 - 17 - R2 - 18

Tribl is to inform you that the Rochester Planning Board at its November 7, 2018 meeting APPROVED your application interencing above.

All of the precedent conditions between mast is med by the applicant, at the expense of the applicant, prior to the plant being certified by the Prenning Department, Certification of the primate received point to issuitance at a building permit or recording of any plants. Once these private conditions are met and the plant are condition the approval is considerable.

The plans will need to reflect the correct Mag-Lot #, which will be issued as part of the subdivision that will occur prior to this side plan.

Pisses remove the phasing plan from plan set. (At the 10/20/16 First the applicant and stall agreed that phasing will not be required or (aschled if the literatured and diffice are completed prior to Cardinate of Citizaparty requisits).

On Sheet C-505 please change the fence detail label from "8" to "0" feet.

Please change second truttumbared note on Shael C-101 to read "Loop: road is designed as a private road and must remain a dinitial road".

Pisase-add Sghiting fixture detail trust adheres to lightling regulations (Site Plan Regulation Article 3, Section 6).

Department for specifications, and add the requirements to plan notes bistalis.

No parking eigns are required stong the arbits of the projected scene and hibrinity. Plains Road (as suggested by the Department of Public Viories).

\$5,000 will be provided by the applicant for additional sidewalks on Milton Roads 8)8 Current use The subject property is not in Current Use.

State of an economister. The plane are to be fied into the State Plane Goddshille.
 System.

These buildings will require sprinders, starms, and others monitoring

The applicant is required to provide the applicants not work without the City will be required before the applicant one work without the City rights of

Performance outeraffee. The expiration prior to besusence of a building permit or beginning alles work, and provide a file improvement and resolvation sensating. The beginning alles work, and provide a file improvement and resolvation or the approved constructed to the Expertised (schulzing 1 of the configuration) of the approved and threaty completion of talls sort, and alle residencies within this development, believe the authorization state in sort, and also residencies within this development, believe the authorization state of the approved on the configuration of the approved on the approved on the approved of the approved on the approved on



November 14, 2018

NOTICE OF DECISION

Re: 2-Lot subdivision. Cases 215-17-R2-18

Verify Nop-Lot numbers of each lot with the Assessing Department. Any requested revisions must be locked on the plants.

a) None all this time.

1 Plan modifications. The piec drawings are to be modified as follows: Update the subdivision plan sheet 2 of \$ to reference that was granted on October 12, 2016.



January 5, 2016

Based updatury place and application, approved on Santaly 5, 2017. We see Newby leading R.S.A. 4857A:17 Africation of Terrals Persist ACT-1497. The partial G-fable of the 1000 energy consumers.

bettom way Rethern McCarriey, P.E.





172016-1166 FLOW! 12,566 grilloneWay APPROVAL DATE I/TO/2011

DRS approves dealign place and specifications for basic SDR 35, 346 LP 67 PVC - SDR 350

out Yighe & Bond - Kenneth Stawngroup, Fit



Al6.22 206

3015-20. Elembor: LLC applicant requests a Viewaging to permit 5,652 eq. ft. of by ends for reacts unit on this 7, respect of the required 7,500 eq. ft. per unit.
This request is accomply to the Cay's Zonos Crofmance Chapter 42.19, Sections 8. Location: 15 Norway Plains Rd. Map 0215 Lot 0017 Block 0000; Residential 2 Zime,

Ale Relack The Chair - plant the Nation of the Record Zon in a Board of adjustment



Location: 15 Nonway Pietre Road, 0215-0017-0000, Residential 2 Zone

The variance were ADPENDIZED as requested for the following resecrat:

The variance will not be accounts; or the public histories because it will not derivisible this value. The split of the ordinates clearly and the public through through the public through through the public through through through through through through through th

Mr. Ralph Torr - Chair Gwhaster Zoning Board of Asjustment



es: Rechestic Planning Board Ken Staveogroups, Tubo and Board (via esta

**Proposed** 

# **Multi-family** Development

Tighe&Bond

www.tighebond.com

**Norway Plains Road** Site Plans

Tenants In Common: Robert Graham 81 Lakeview Drive Nottingham, NH 03290

Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

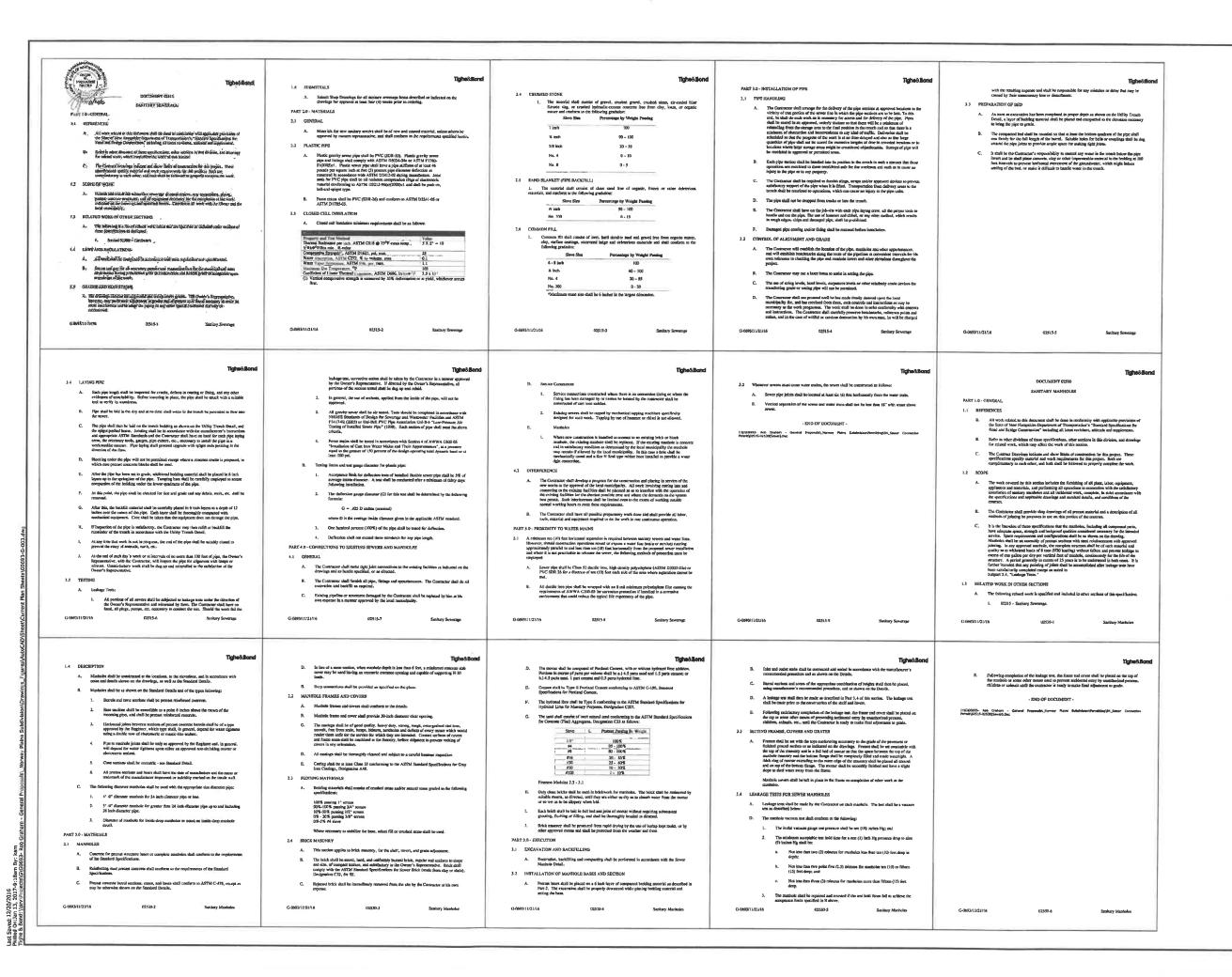
Rochester, New Hampshire

MARK	DATE	DESCRIPTION
PROJECT	NO:	G-0693
DATE: 0	1/13/2017	
FILE: G	0693-G-00	3.dwg
DRAWN	BY:	KAM
CHECKE	D:	KAM
APPROVE	D:	BLM

**PERMITS** 

SCALE: AS SHOWN

G-003



Tighe&Bond
www.tighebond.com





# Proposed Multi-family Development

### Norway Plains Road Site Plans

Tenants In Common: Robert Graham 81 Lakeview Drive Nottingham, NH 03290

Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

Rochester, New Hampshire

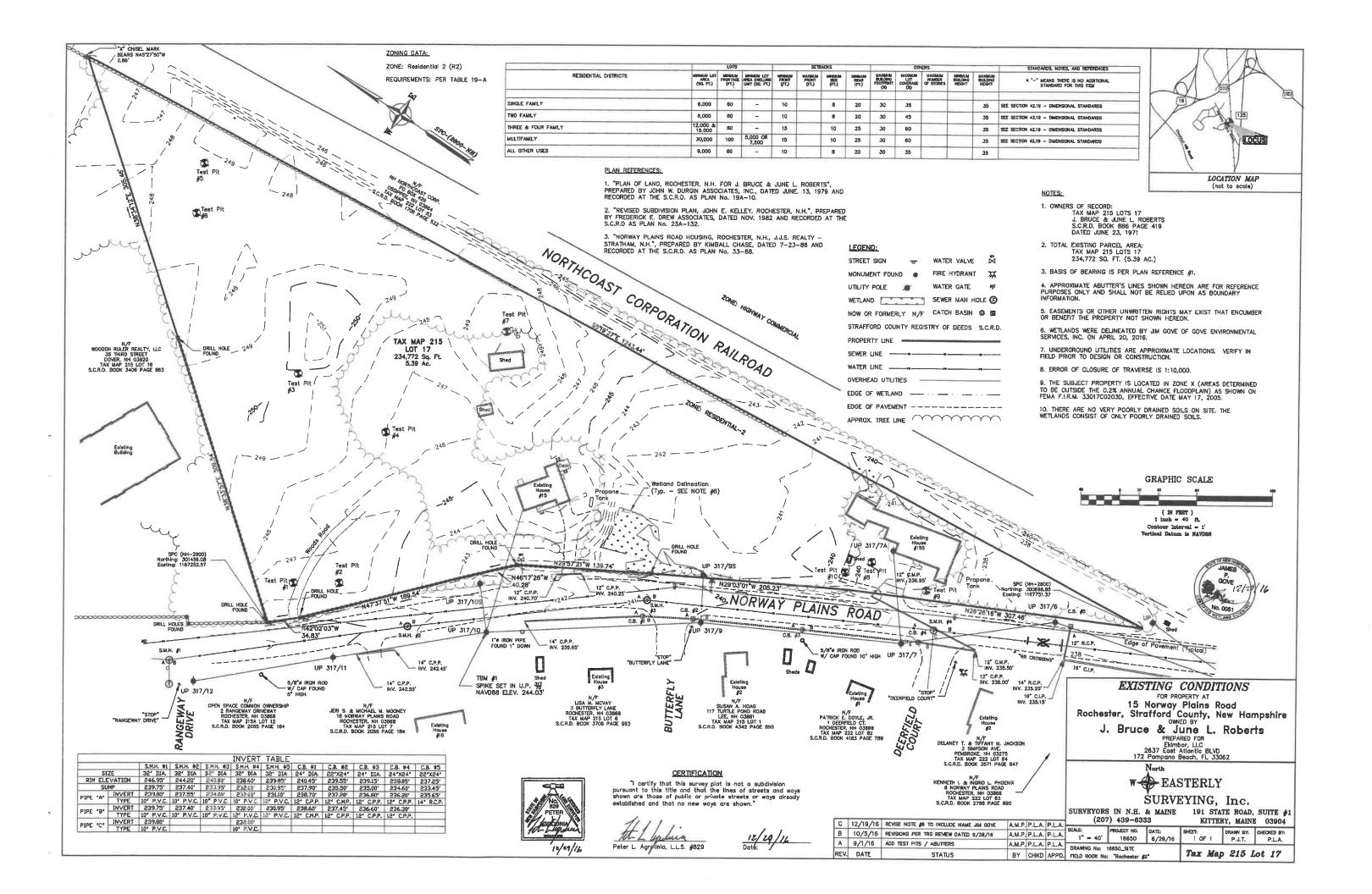
-		
MARK	DATE	DESCRIPTION
PROJECT		G-0693
DATE: 0	1/13/2017	
FILE: G	0693-G-00	3.dwg
DRAWN	BY:	ERC/KAM

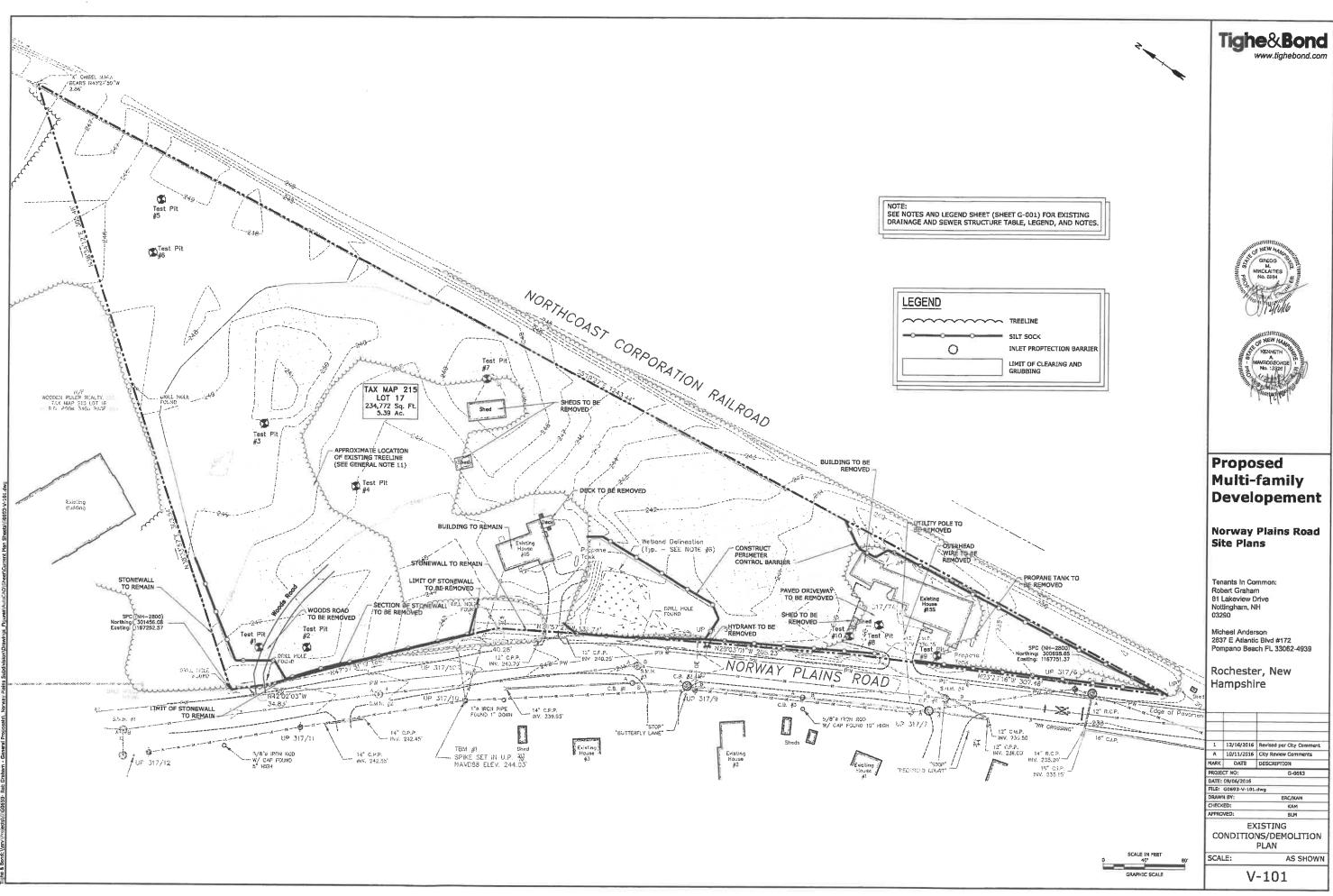
NHDES APPROVED
SEWER SPECIFICATIONS

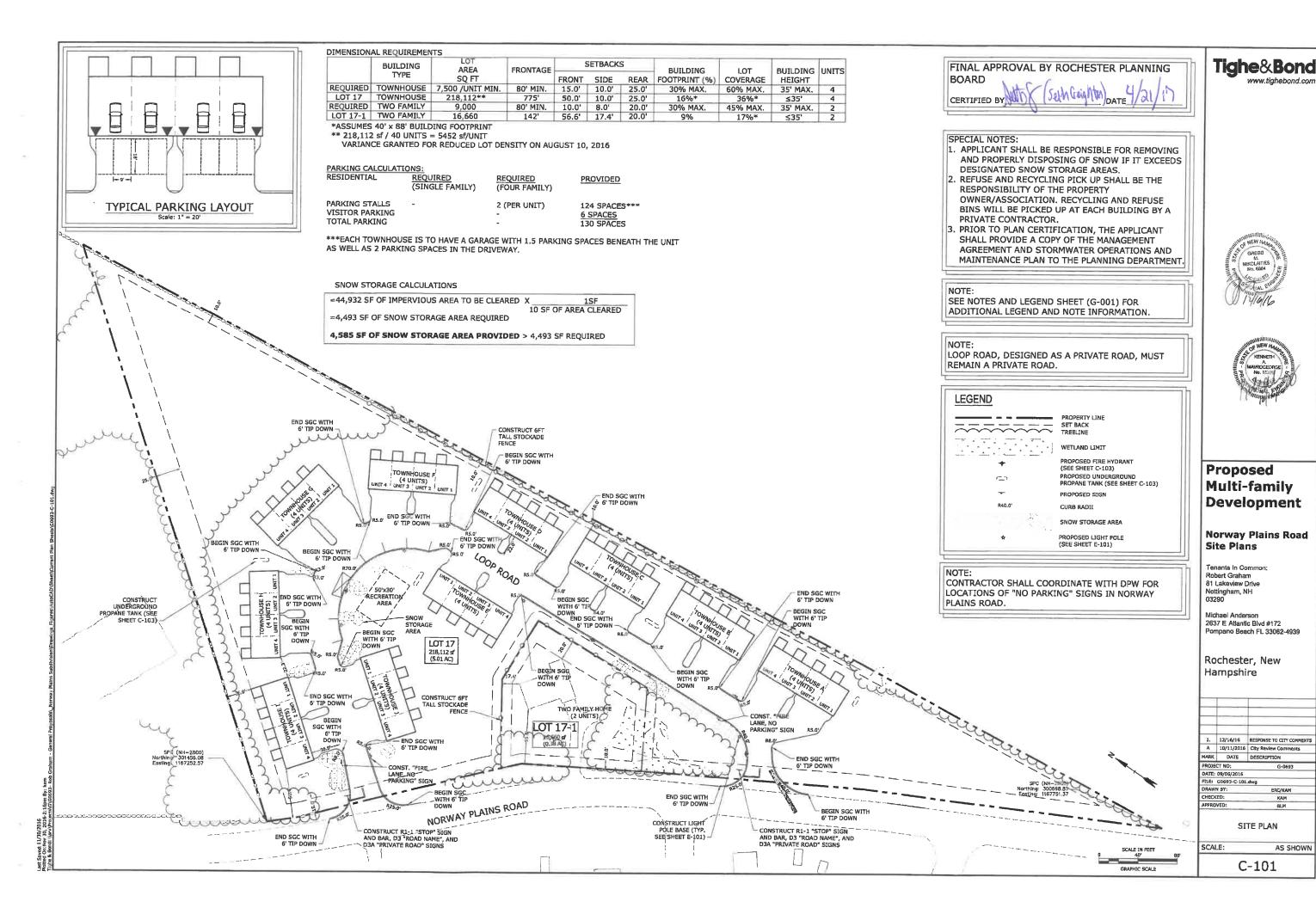
CALE: AS SHOWN

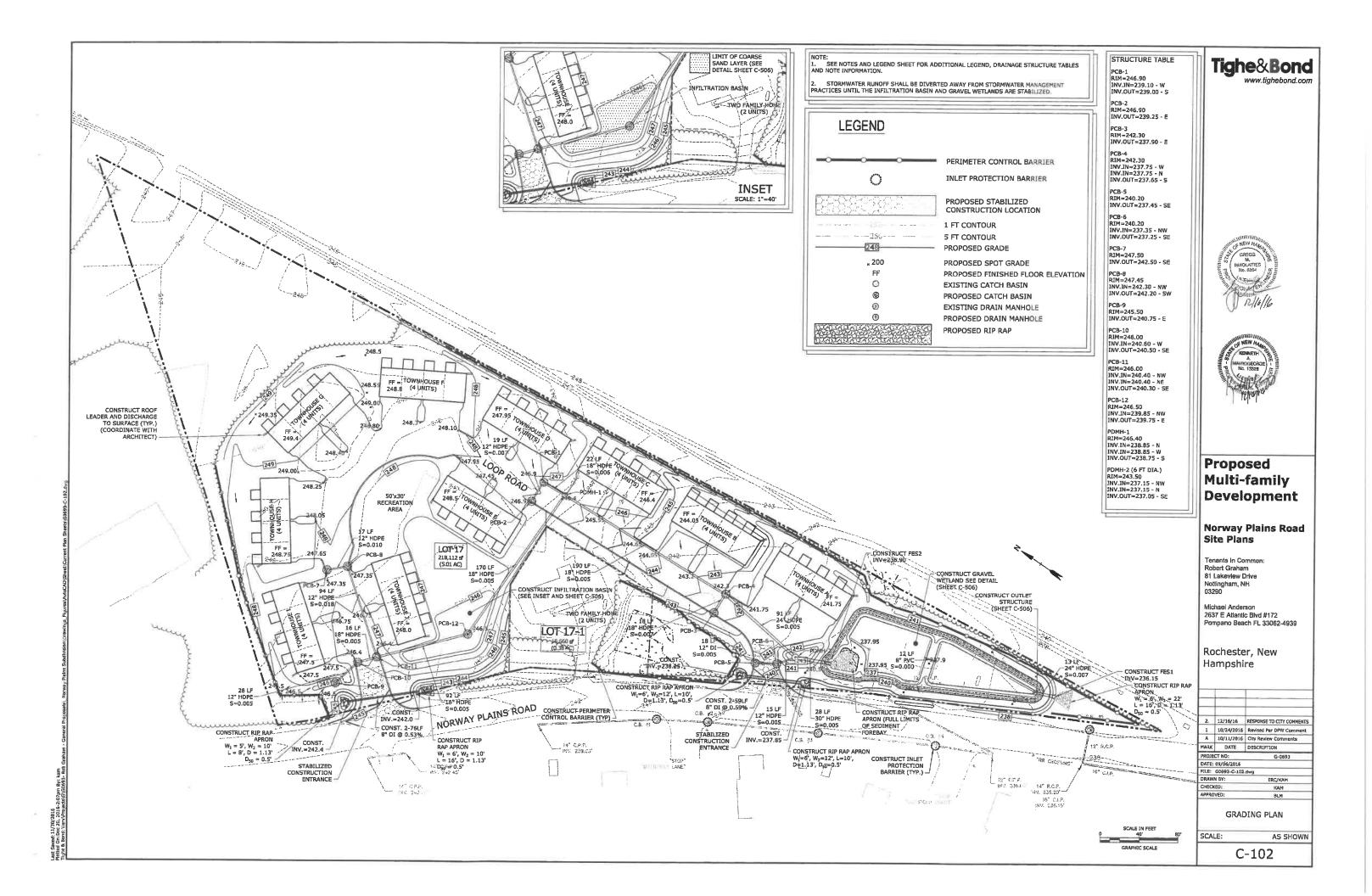
APPROVED:

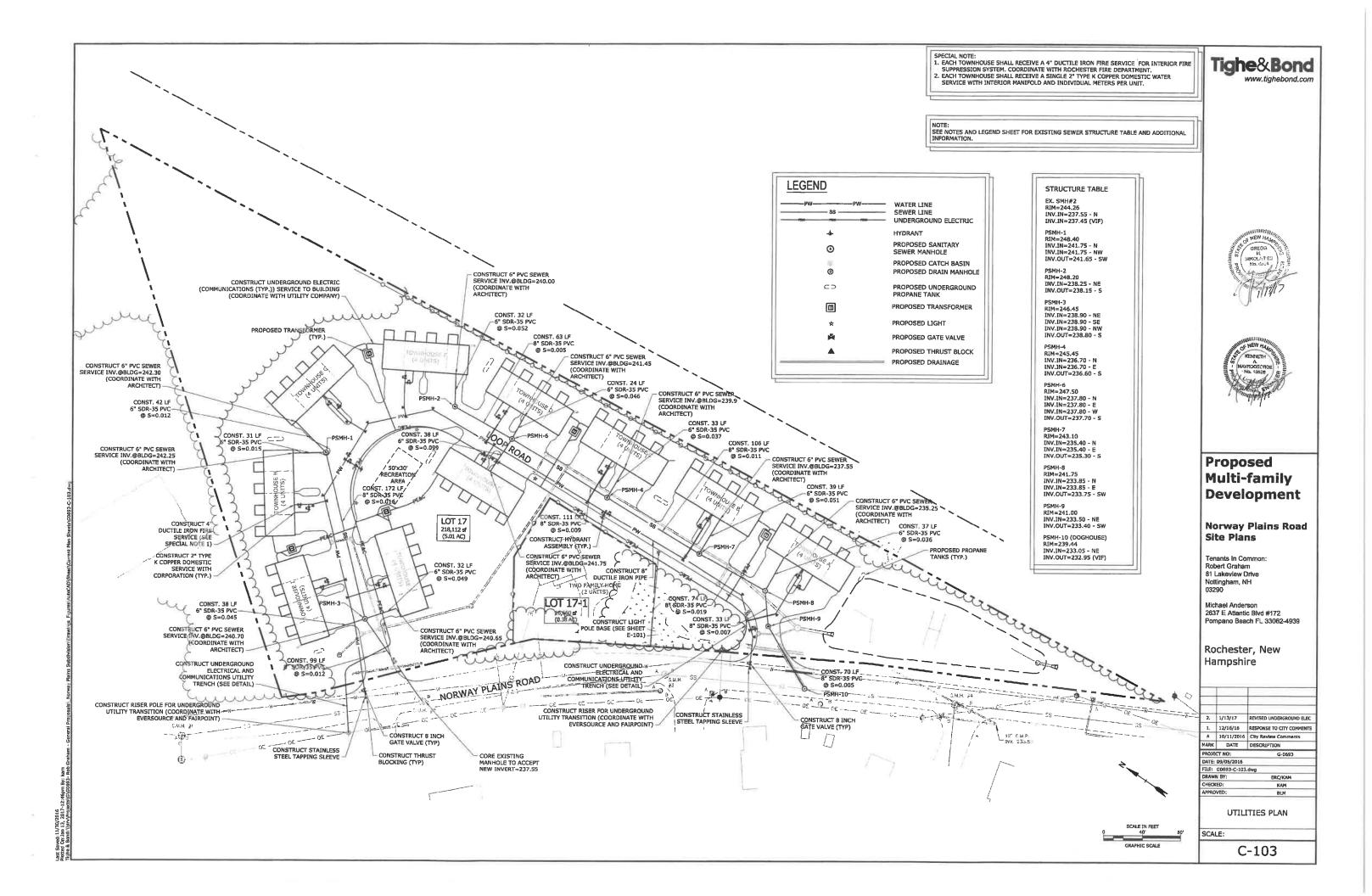
G-004

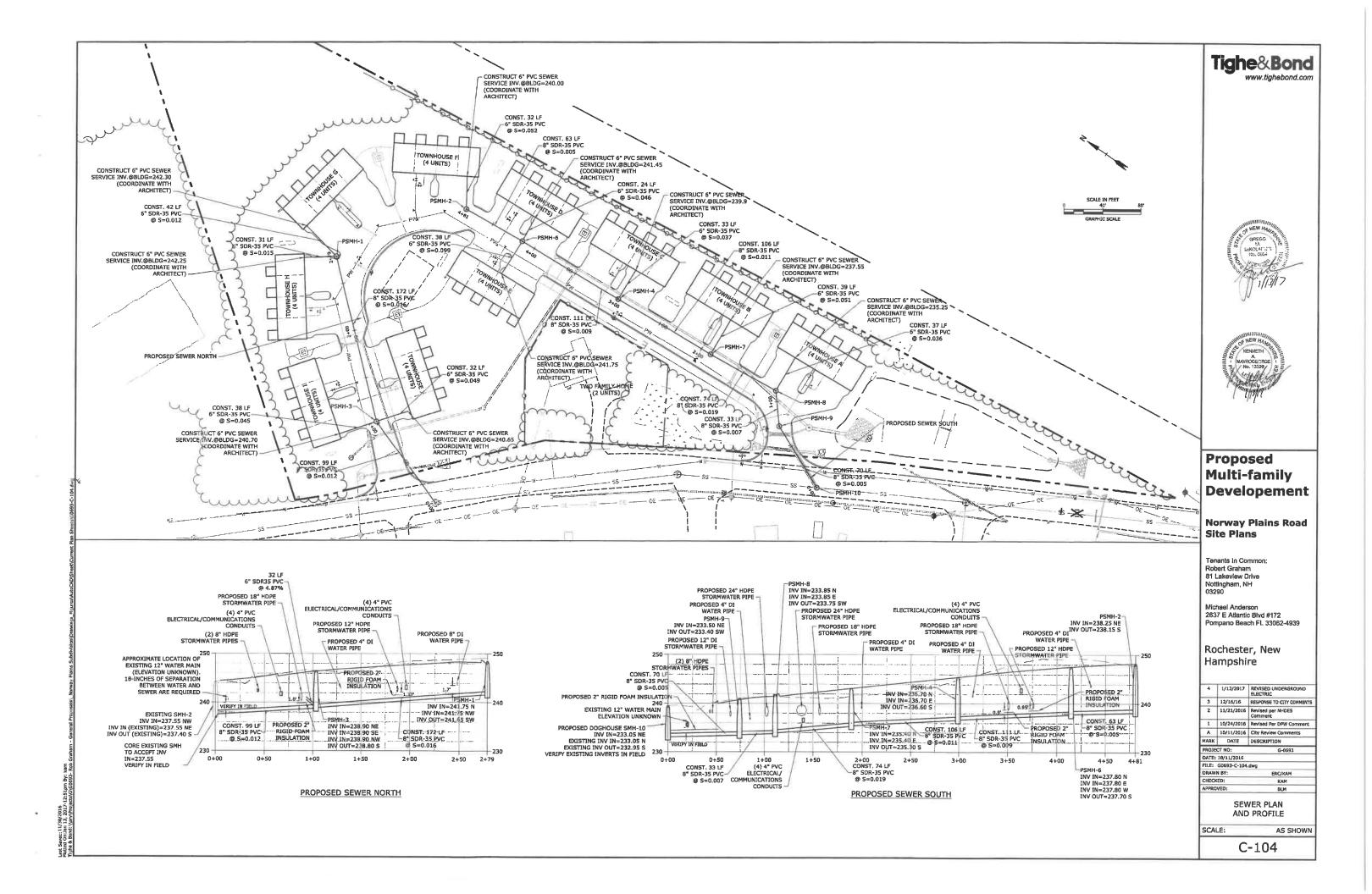


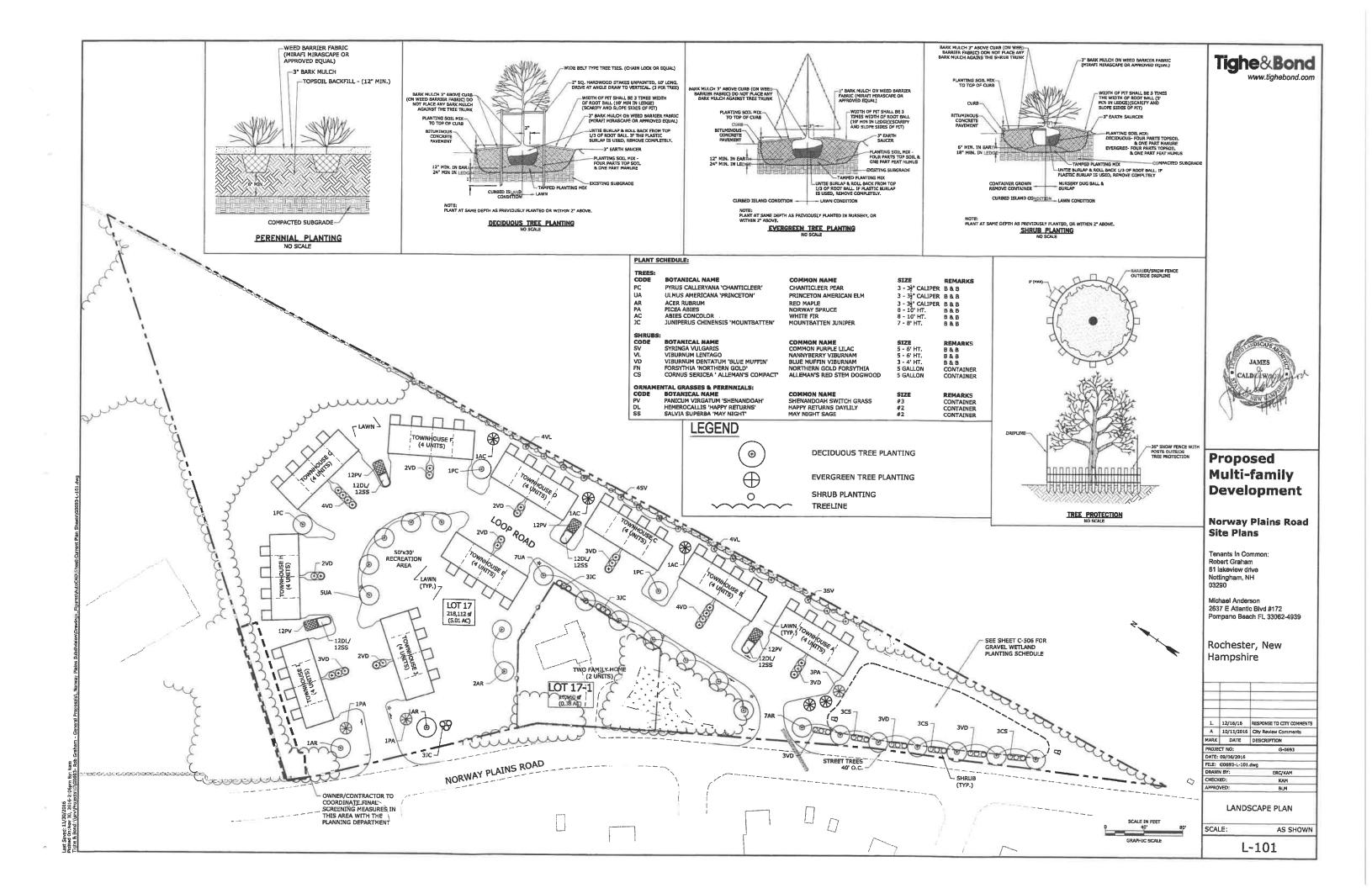


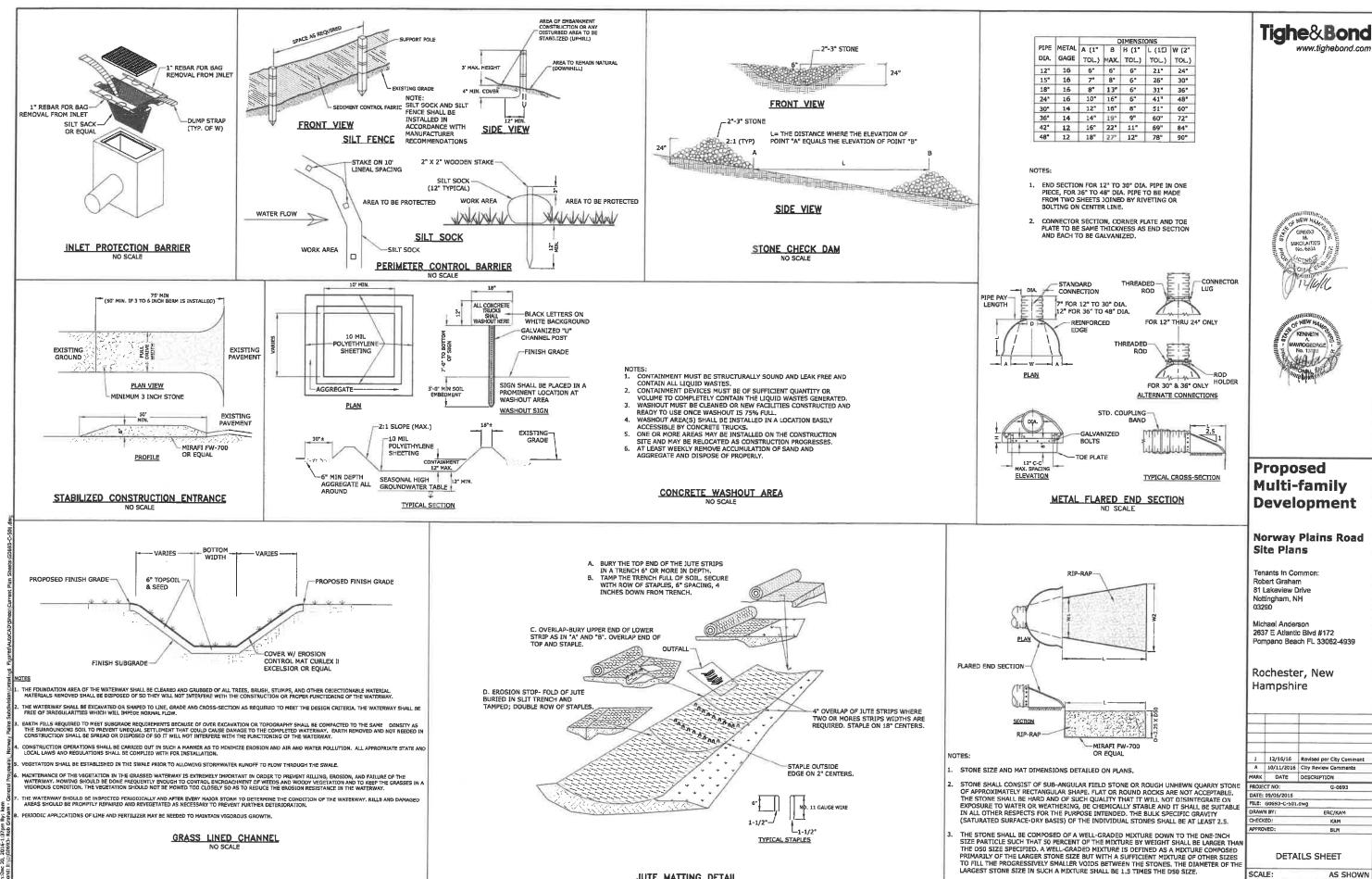












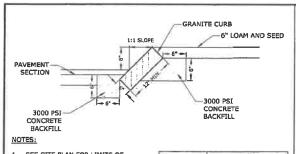
JUTE MATTING DETAIL

SCALE:

RIP-RAP APRON DETAIL

NO SCALE

AS SHOWN



SEE SITE PLAN FOR LIMITS OF CURBING.
 ADJOINING STONES OF STRAIGHT

CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

SAME LENGTH OF STRAIGHT CURB
STONES = 18 INCHES.

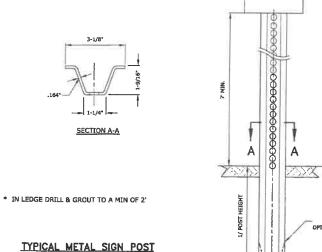
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8 FEFT 5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE

CHART.
6. JOINTS BETWEEN STONES SHALL BE

SLOPED GRANITE CURB NO SCALE

SIGN ID NUMBER	SIGN SIZE WIDTH x HEIGHT	SIGN	TEXT DIMENSIONS	NO. OF SIGNS		LEGEND	BORDER	POST SIZE & QUANTITY	UNIT AREA	AREA (SQ. FT.)
R1-1	30" x 30"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION(W/2012 SUPPLEMENT) PUBLISHED BY USDOT - FHWA		RED	WHITE	WHITE	U-CHANNEL	6.25	12.5
D3	36" x 9"	LOOP ROAD		2	GREEN	WHITE	WHITE	U-CHANNEL	2.25	4.50
D3A	30" x 9"	PRIVATE ROAD		2	WHITE	BLACK	WHITE	U-CHANNEL	1.75	3.50
R7-1	12" x 18"	NO PARKING FIRE LANE		4	WHITE	RED	WHITE	U-CHANNEL	1.50	6.00

SIGN LEGEND



- LOAM | PAVED -

6" LOAM-& SEED

TRACER TAPE

COMMON FILL

BACKFILL MATERIAL-

SOIL

SEE PAVEMENT DETAIL

-SPRING LINE

PAVEMENT

DETAIL -2" MIN. CLOSED CELL PIPE INSULATION WHERE CALLED FOR ON PLANS Tighe&Bond





# Proposed **Multi-family** Development

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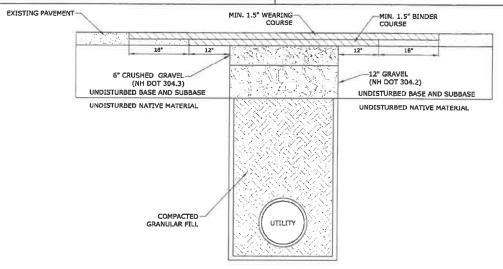
### Rochester, New Hampshire

_		
1	12/16/16	Revised per City Comment
Α	10/11/2016	City Review Comments
MARK	DATE	DESCRIPTION
PROJE	CT NO:	G-0593
DATE:	09/05/2016	
FILE:	G0693-C-502	dwg
DRAW	N BY:	ERC/KAM
CHECK	ED:	KAM
	VED:	

**DETAILS SHEET** 

AS SHOWN

C-502



PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUIT.

USE CURVED CURB USE RADIAL JOINTS 1'-6"

PAYEMENT EUGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.

TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL ANDO COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY.

TOP 18" OF BACKFILL SHALL BE 6" IF COMPACTED 3/4" CRUSHED GRAVEL (NHDOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NHDOT 304.2).

ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAYEMENTS SHALL BE TACK COATED.

PAYEMENT HICKNESS SHALL MATCH EXISTING BUT IN NO CASE SHALL BE LESS THAN 3" THICK TOTAL,

PAYEMENT SHALL BE PLACED IN TWO PHASES:

PAVEMENT SHALL BE PLACED IN TWO PHASES:

1. THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.

2. THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5", WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.

ANY TRENCH PATCH REQUIRES PRE-APPROVAL BY DPW AND IS SUBJECTED TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

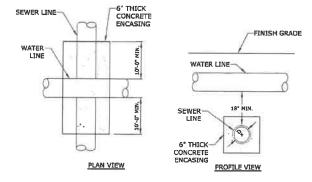
### ROCHESETER, NH UTILITY TRENCH PATCH

-6" LOAM & SEED VARIES -NHDOT SECTION #401 HOT BITUMINOUS CONCRETE 3" NOMINAL 1.5" OF 3" SUPERPAVE WEARING COURSE 1.5" OF 3" SUPERPAVE BINDER COURSE SEE GRADING SLOPE LIMITS " CRUSHED GRAVEL BASE NHDOT ITEM #304.3 SEE CURB DETAIL AND SITE PLAN FOR LOCATIONS SEE GRADING (SLOPE TO MATCH PAVEMENT SLOPE) PLAN FOR SLOPE LIMITS -12" GRAVEL SUBBASE NHDOT ITEM #304.2 (SLOPE TO MATCH PAVEMENT SLOPE) COMPACTED COMPACTED

SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 ATACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.

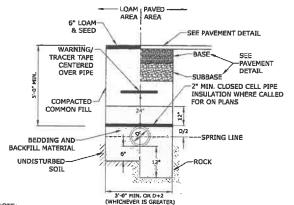
CONTRACTOR SHALL HAVE THE OPTION OF RECLAIMING THE EXISTING PAVEMENT AND REMOVING THE MATERIAL, THEN REUSING THE RECLAIMED MATERIAL AS A PAVEMENT SUBBASE.

STANDARD DUTY PAVEMENT SECTION



NOTE: A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES, AN 18" MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE MINIMUM OUTSIDE TO OUTSIDE VENTILAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANTIARY SEWER CROSSINGS, WHERE SEWER AND WATER CROSS, ENCASE SEWER IN CONCRETE 6" THICK OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE WITH JOINTS FOR A MINIMUM DISTANCE OF 10 FEET EACH SIDE OF THE CROSSING. CROSSING SHALL CONFORM TO CITY OF ROCHESTER WATER DEPARTMENT STANDARDS AND SPECIFICATIONS.

## WATER & SEWER CROSSING



NO SCALE

AREA AREA SEE PAVEMENT DETAIL WARNING/ TRACER TAPE CENTERED OVER PIPE DETAIL -2" MIN. CLOSED CELL PIPE INSULATION WHERE CALLED FOR ON PLANS Ole -SPRING LINE BEDDING AND BACKFILL MATERIAL SOIL

NOTE:

1. CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO SPRING LINE.

2. SAND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM SPRING LINE UP TO 12"

2. SAND BEATEL FOR FOLL WIDTH OF THE TRENCH FROM SPRING LINE UP TO ABOVE TOP OF PIPE.
3. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS, COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF ROCHESTER.

SEWER TRENCH NO SCALE

NOTE: (WHICHEVER IS GREATER)

1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF ROCHESTER.

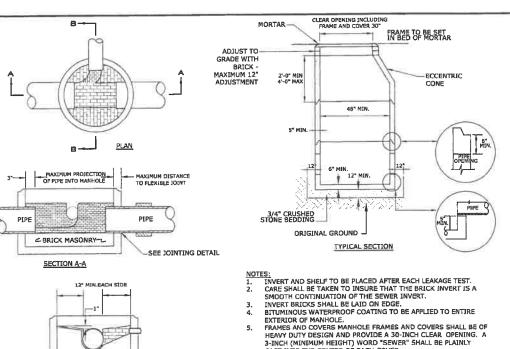
GAS TRENCH NO SCALE

NOTE:

1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.

2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF ROCHESTER.

WATER TRENCH



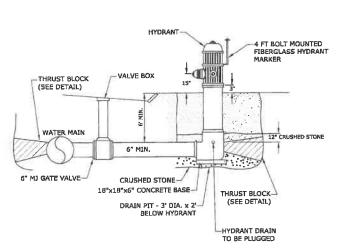
TOP OF SHELF SHALL BE 1" ABOVE CROWN OF HIGHEST PIPE

SECTION B-B

CAST INTO THE CENTER OF EACH COVER.
HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS
USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO

ASTM C478-06.

BASE SECTION OF MANHOLE SHALL BE OF MONOLITHIC
CONSTRUCTION TO A POINT AT LEAST 6" ABOVE THE CROWN OF
THE HIGHEST INCOMING PIPE. THIS REQUIREMENT SHOULD BE STATED IN THE SPECS AND/OR PLANS.

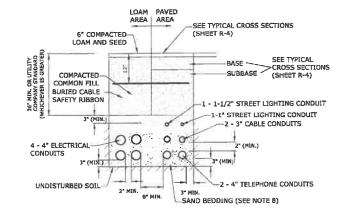


HYDRANT INSTALLATION AND OPERATION, MANUFACTURE AND MODEL, AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF ROCHESTER WATER DEPARTMENT AND THE CITY OF ROCHESTER FIRE DEPARTMENT. HYDRANT MARKER TO BE 3/8" FIBERGLASS RODS BY E-ZGUIDE PRODUCTS OR

APPROVED EQUAL.

COLOR CODED COLLARS ARE REQUIRED ON ALL PROPOSED HYDRANTS.
COLOR CODED COLLARS SHALL BE 4.5" NST REFLECTIVE 11" OD X 5-3/4" ID4.
TESTING OF ALL HYDRANTS SHALL BE COORDINATED WITH THE CITY OF ROCHESTER
FIRE DEPARTMENT AND DPW, AND BE PERFORMED PRIOR TO INSTALLING COLOR

FIRE HYDRANT NO SCALE



NOTE:

1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.

2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.

3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.

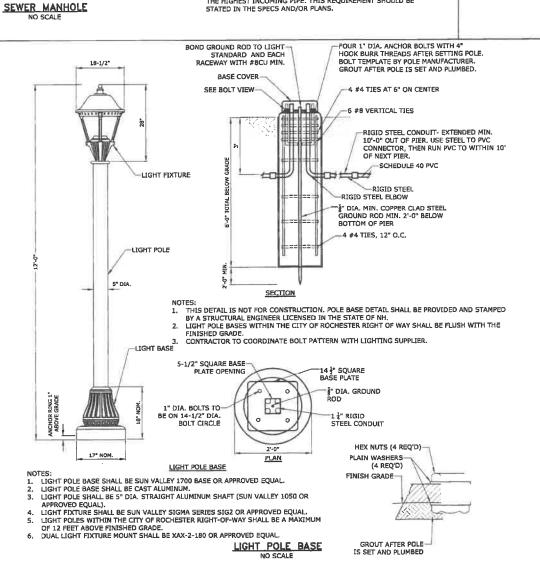
NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE
UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT.
THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT.
CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS
COBILE IN A SUITABLE MANIME.

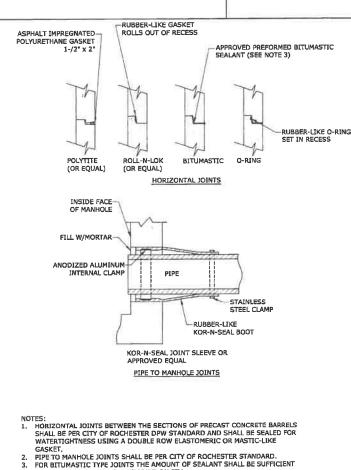
CABLE IN A SUITABLE MANNER

ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 3 FOR 46 INCH RADIUS. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN

LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

# UNDERGROUND ELECTRICAL AND COMUNICATION UTILITY TRENCH

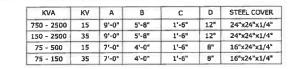


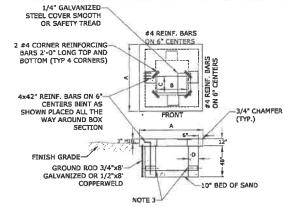


TO FILL AT LEAST 75% OF THE JOINT CAVITY.

4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

SEWER MANHOLE JOINTS





- NOTE:

  1. SET CONCRETE BOX PAD ON SUITABLE GRAVEL BASE AND PROVIDE SET CONCRETE BOX PAD ON SUITABLE GRAVEL BASE AND PROVIDE ADEQUATE DRAINAGE AWAY FROM PAD. REINFORCE ASS SHOWN. LOCATION TO BE ACCESSIBLE BY TRUCK AND SUITABLY PROTECTED FROM PLOW AND TRAFFIC DAMAGE.

  "FRONT" DENOTES THE SIDE ON WHICH THE ACCESS DOORS ARE LOCATED. THE PAD MUST BE INSTALLED SO THAT THE FRONT IS
- READILY ACCESSIBLE.
- READILY ACCESSIBLE.

  3. PROVIDE 8" x 12" CABLE HOLES- ONE PER WALL OR MORE IF NEEDED. LINE UP WITH TRENCHES. HOLES MAY EXTEND TO BOTTOM OF WALLS.

  4. PROVIDE REMOVABLE STEEL COVER, SET FLUSH WITH TOP OF CONCRETE- WITH MIXIMUM OF 2" BEARING ON READ EDGE AND ENDS.

  5. INSTALL GROUND ROD 6" IN FRONT OR LEFT FRONT CORNER OF PAD.

- TOP OF GROUND ROD TO BE 6" BELOW FINAL GRADE.

  COORDINATE AND VERIFY ALL INFORMATION WITH THE LOCAL
  ELECTRICAL POWER UTILITY COMPANY.

PRECEAST CONCRETE TRANSFORMER PAD

# Tighe&Bond





# **Proposed** Multi-family Development

### **Norway Plains Road** Site Plans

Tenants In Common Robert Graham 81 Lakeview Drive Nottingham, NH

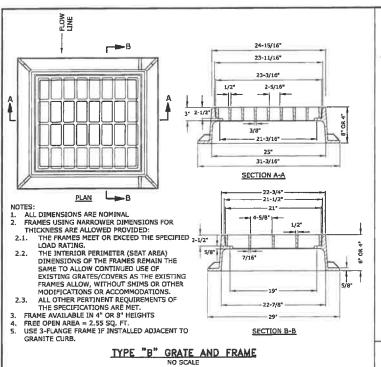
Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

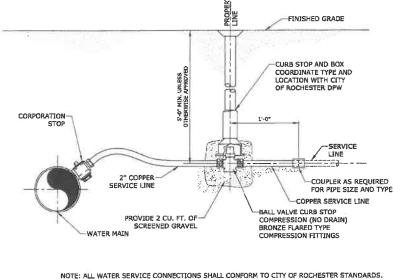
### Rochester, New Hampshire

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2.	12/16/16	Revised per City Comment				
1.	11/21/15	Revised per NHDES Comment				
Α	10/11/2016	City Review Comments				
MARK	DATE	DESCRIPTION				
PROJE	CT NO:	G-0693				
DATE:	09/06/2016					
FILE:	G0693-C-503	.dwg				
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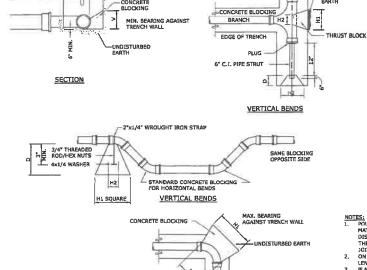
DETAILS SHEET

AS SHOWN SCALE:





WATER SERVICE CONNECTION



NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEN

- THRUST BLOCK TO UNDISTURBED MATERIAL. NO DINTS SHALL BE COVERED WITH CONCRETE.

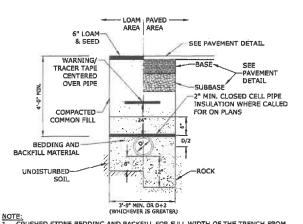
# JOINTS SHALL BE COVERED WITH CONCRETE. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS. INSTILLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE PER CITY WATER DEPARTMENT STANDADAS.



PLAN

HORIZONTAL BENDS

						- 1	ABL	E UI	. DI	MENS	TON	5 FC	JK C	NO.	CRETE	BL	UCK	ING							
PIPE SIZE			, CRO				9	Do BE	₹DS			4	5° BE	NDS			22	1/2° B	ENDS			11	1/40	BEND	5
(H)	H1	HZ	٧	D	CU. FT.	H1	H2	٧	D	CU. FT.	H1	H2	٧	D	CU. FT.	Hl	H2	٧	D	CU. FT.	HT	H2	٧	D	CU. PT
6°Ø	24"	16*	18*	18*	3.50	30"	16°	18"	18"	4.05	24"	10"	16"	18"	3.20	24"	10"	16"	18"	3.20	24"	20°	16*	18"	3.20
8°Ø	36"	18"	18*	18°	5.05	39"	18*	24"	18*	7.30	30"	11"	18"	18*	3,95	24"	11*	18"	18"	3.45	24"	11"	16"	18"	3,40
12°Ø	54"	30"	24"	24"	13.4	54"	32"	36"	24"	18.15	42"	18"	24"	24"	9.60	24"	187	24"	24"	6.60	24"	18"	21°	24°	6.10

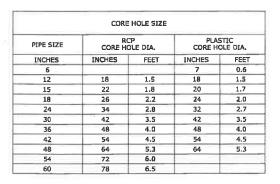


NOTE:

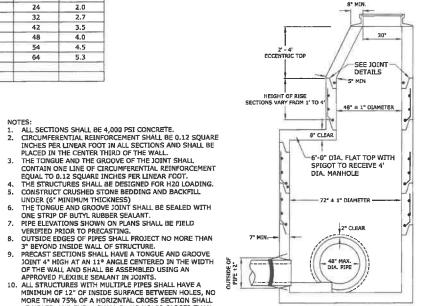
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM
6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF

ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF ROCHESTER.

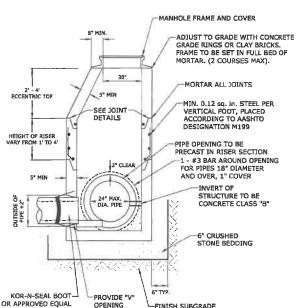
STORM DRAIN TRENCH



DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
4'	5*	6"
5'	6"	8"
6'	7"	8"
8'	9"	10"
1		8° MIN.







# 4' DIAMETER DRAIN MANHOLE

# **Proposed Multi-family Development**

### **Norway Plains Road** Site Plans

Tighe&Bond

Tenants In Common: Robert Graham 81 Lakeview Drive Nottingham, NH 03290

Michael Anderson 2637 E Atlantic Blvd #172 ompano Beach FL 33062-4939

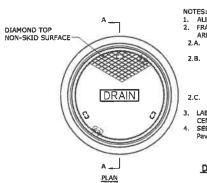
### Rochester, New Hampshire

1	12/16/16	Revised per City Comment			
A	10/11/2016	City Review Comments			
MARK	DATE	DESCRIPTION			
PROJE	T NO:	G-0693			
DATE:	09/06/2016				
FILE:	G0693-C-504	.dwg			
DRAW	V BY:	ERC/KAM			
CHECK	ED:	KAM			
4 BBB B	VED:	BLM			

AS SHOWN

C-504

SCALE:



JIES:
ALL DIMENSIONS ARE NOMINAL.
FRAMES USING NARROWER DIMENSIONS FOR THICKNESS
ARE ALLOWED PROVIDED:
2. A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD
RATING.

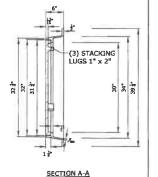
RATING.

2.8. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.

C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN HE CENTER OF THE COVER.

SEE NHDOT DETAIL DR-2 "Grate and Frame, M.H.Cover and ment Depression Details* FOR MORE DETAILS

DRAIN MANHOLE COVER AND FRAME



VI

UNDER (6" MINIMUM THICKNESS)

THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTTY, RUBBER SEALANT.

PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD 7. PIPE ELEVATIONS SHOWN ON PLANS SHALL DE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11º ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN ADDRAVER ELEVALE SEALANT IN JOINTS.

OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.

10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZINTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN

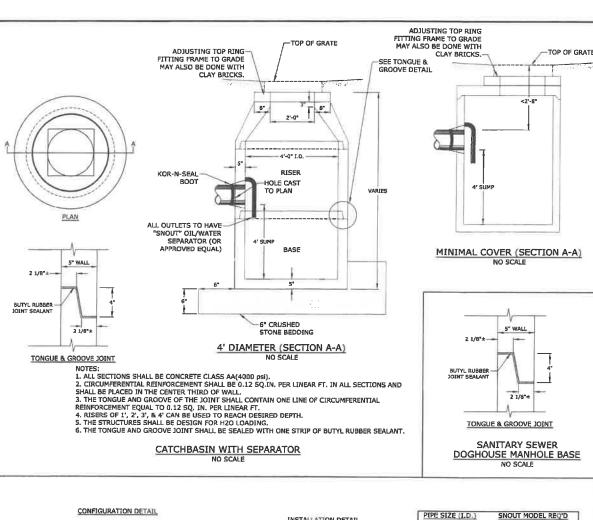
CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES FER LINEAR FOOT.

THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL

NOTE:
PAMREX FRAME AND COVER SHALL BE USED WITHIN THE
CITY OF ROCHESTER RICHT-OF-WAY ONLY.

PAMREX 32-INCH MANHOLE FRAME & COVER

6' DIAMETER DRAIN MANHOLE



SECTION D-D

ES:
MINIMUM 4' DIAMETER MANHOLE.
DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE; OTHERWISE, THE
OPENING MUST BE CAST. SIZE, LOCATION AND ANGLE OF ENTRY SHOULD BE AS REQUIRED BY THE PLANS.
OPENINGS IN PRECAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE EXISTING

PIPE.
TOP HALF OF THE EXISTING PIPE TO BE REMOVED FOR FULL LENGTH EXPOSED INSIDE MANHOLE. EXISTING MAIN TO BE NEATLY CUT ALONG THE SPRING LINE OF THE FIPE.
SEE SANITARY MANHOLE DETAIL FOR ADDITIONAL INFORMATION,
MANHOLE BASE SECTION SHOWN, ALL OTHER SECTIONS AND CONSTRUCTION DETAILS SHALL COMPLY WITH THE SEWER

MANHOLE DETAIL.

BARREL AND SLAB SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO

ASTM C478-06 & AASHTO M-199.

CIRCUMFERENTIAL REINFORCEMENT SHALL CONFORM TO ASTM A-185.

CIRCUMFERENTIAL REINFORCEMENT SHALL CONFORM TO ASTM A-185.

ROTTOM REINFORCEMENT SHALL CONFORM TO ASTM A-615 GRADE 60 AND PLACED PER ASTM C-478.

INVERT AND SHELF TO BE PLACED AFTER EACH VACUUM TESTING OF THE MANHOLE.

CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.

INVERT BRICKS SHALL BE LAID ON EDGE.

INVERT BRICKS SHALL BE LAID ON EDGE.

BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.

CONTRACTOR TO VERIFY NUMBER AND LOCATION OF OPENINGS WITH UTILITIES PLAN.

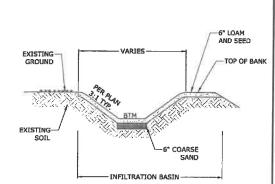
THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT

THE OPENINGS BETWEEN THE PRECAST BASE SECTION AND EXISTING FLOW THROUGH SEWER PIPE PENETRATIONS SHALL BE FILLED WITH NON-SHRINK GROUT. PROVIDE BRICK AND MORTAR BELOW THE PIPE PENETRATION, AND PARGE EXTERIOR OF THE BRICK WITH MORTAR AND WATERPROOF WITH BITUMINOUS DAMP-PROOFING COATING.

THE INVERT AND SHELF OF ANY NEW CHANNELS SHALL BE CONSTRUCTED ENTIRELY OF BRICK AND MORTAR. THE BRICK SHELF SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOW THROUGH CHANNEL.

THE DUSCRIPTION OF THE MATTUP MATERIAL BENEATH THE EXPETTING SEMES AND FRANCE OF THE PLANT OF THE PLANT.

18. THE DESIGN INTENT IS TO LEAVE THE NATIVE MATERIAL BENEATH THE EXISTING SEWER PIPE UNDISTURBED. IF THE NATIVE MATERIAL DIRECTLY BELOW THE EXISTING PIPE DOES GET DISTURBED, OR REMOVED, FOR ANY REASON, IT SHALL BE REPLACED WITH PROPERLY COMPACTED 34" STONE AND APPROVED BY THE LOCAL INSPECTOR PRIOR TO COMPLETION OF THE INSTALLATION.



CONSTRUCTION NOTE:

- 1. THE BASIN FLOOR SHOULD BE OVERED WITH A 6° LAYER OF COARSE SAND.
  2. THE FINISH BOTTOM SHALL BE A GRASS TURF THAT CAN BE INUNDATED.

- 1. TO PREVENT DEGRADATION OF INFILTRATION FUNCTION:

  A. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
- OF THE STSTEM.

  B. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILITATION BASIN DURING ANY STAGE OF CONSTRUCTION.

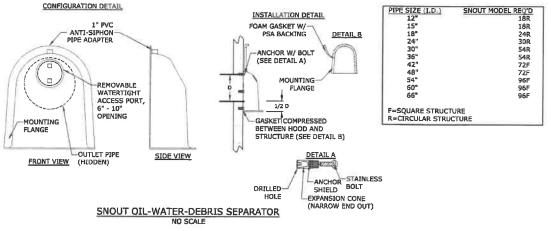
  DO NOT PLACE INFILITATION BASINS INTO SERVICE UNTIL THE
- CONTRIBUTING AREA HAS BEEN COMPLETELY STABILIZED.

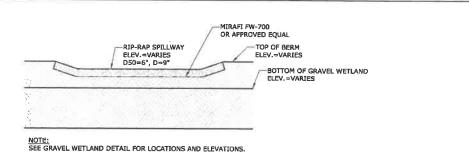
INFILTRATION BASIN TYPICAL CROSS-SECTIONS



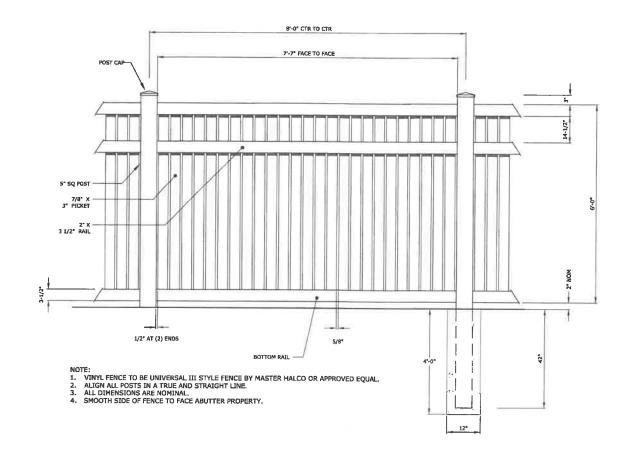
Tighe&Bond







RIP-RAP SPILLWAY



6' VINYL PRIVACY FENCE

# **Proposed Multi-family Development**

### **Norway Plains Road** Site Plans

Tenants in Common: Robert Graham 81 Lakeview Drive Nottingham, NH

Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

### Rochester, New Hampshire

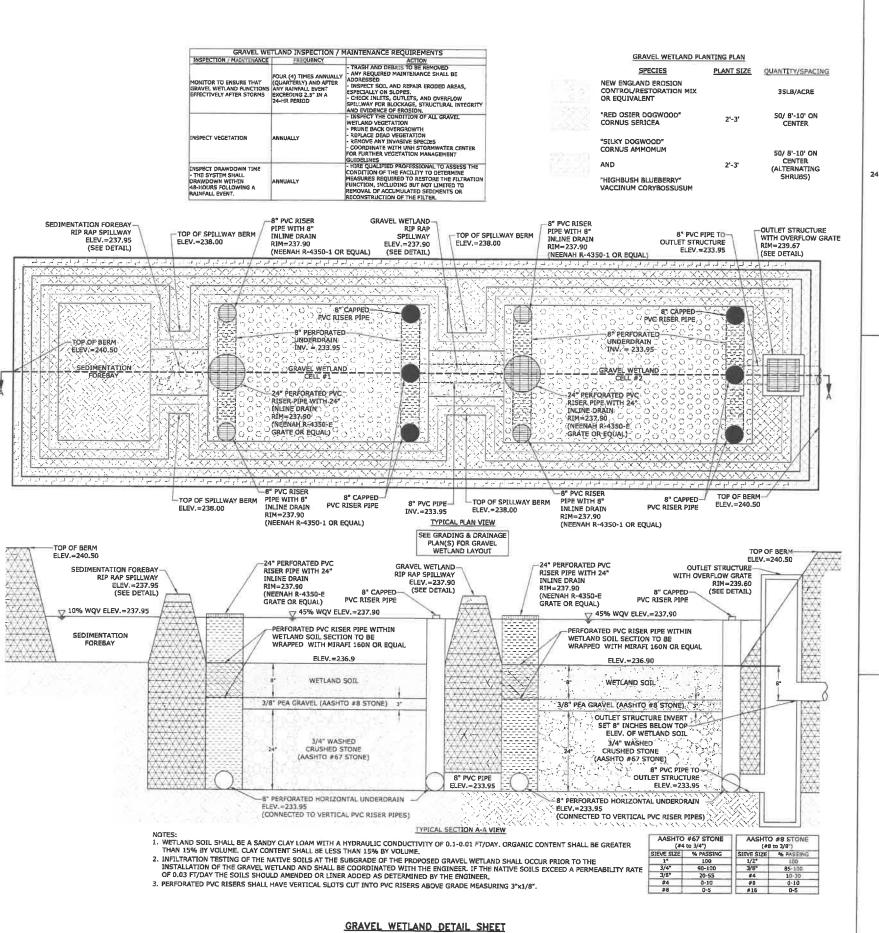
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1.	12/16/16	RESPONSE TO CITY COMMENTS				
A	10/11/2016	City Review Comments				
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CHECK	ED:	KAM				
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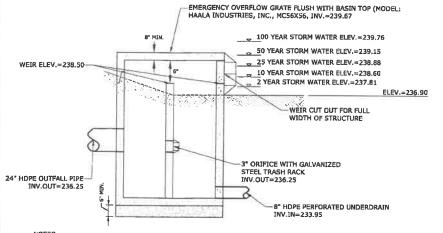
**DETAILS SHEET** 

SCALE:

C-505

AS SHOWN





- NOTES:

  1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).

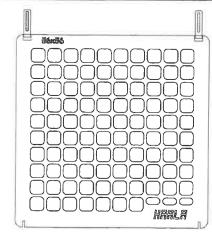
  2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE THIRDE WALL.

  3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.

  4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.

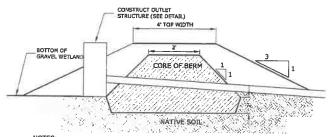
  5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

# OUTLET STRUCTURE



NOTES:
1. GRATE SHALL BE HAALA INDUSTRIES, INC.
MCS6XS6 TOP MOUNT GRATE OR EQUAL.
2. GRATE TO BE SECURED TO CONCRETE

# OVERFLOW GRATE



1. CORE MATERIAL SHALL MEET USGS CLASSIFICATION SC, SM, CL OR ML AND HAVE A MAXIMUM PARTICLE SIZE OF 3" AND A PERMEABILITY LESS THAN 0.00000S CM/S, AND MEET THE FOLLOWING GRADATION

SIEVE SIZE No. 200

PERCENT FINER BY WEIGHT

2. PIPE SHALL BE FULLY EMBEDDED IN CORE TO ELIMINATE SEEPAGE

CLAY CORE BERM







# Proposed **Multi-family Development**

### **Norway Plains Road** Site Plans

Tenants In Common Robert Graham 81 Lakeview Drive Nottingham, NH 03290

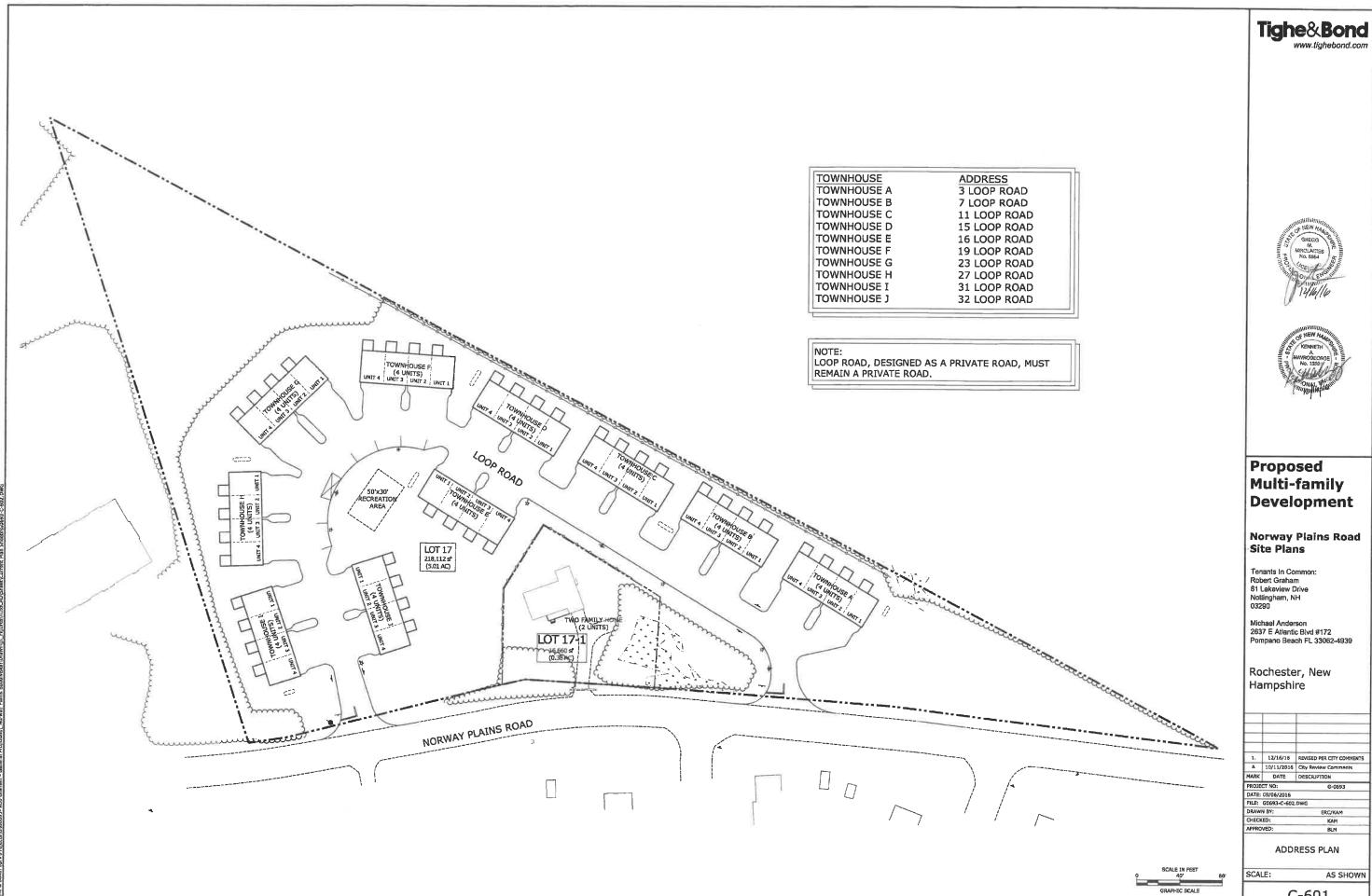
Michael Anderson 2637 E Atlantic Blvd #172 Pompano Beach FL 33062-4939

### Rochester, New Hampshire

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CHECK	ED:	KAM

DETAILS SHEET

SCALE: AS SHOWN



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