

F:\Projects\CAD\421417\4214CVR-PH3.dwg CVR 10/09/20 9:13am ccoll

INDEX TO DRAWINGS

1. TITLE SHEET
2. EXISTING CONDITIONS PLAN
3. SITE OVERVIEW PLAN
4. SITE PLAN
5. GRADING & DRAINAGE PLAN
6. UTILITY PLAN
7. EROSION CONTROL PLAN
8. LANDSCAPE PLAN
9. LANDSCAPE DETAILS
- 10-13. CONSTRUCTION DETAILS
- 1 of 1. TRUCK TURN EXHIBIT
- BUILDING ELEVATIONS (BY OTHERS)

PERMITS & APPROVALS

TYPE	PERMIT NUMBER	APPROVED
NHDES ALTERATION OF TERRAIN	AOT-1238	4/12/17
NHDES SEWER EXTENSION	AOT-1740	1/26/20
	D2017-0301	4/3/17

WAIVERS & VARIANCES

- 1) SEE VARIANCE GRANTED BY THE SALEM ZONING BOARD OF ADJUSTMENT ON SEPTEMBER 6, 2016, PETITION #8, TO ALLOW THE PROVISIONS OF THE LARGE SCALE REDEVELOPMENT ORDINANCE (SECTION 490-710, SUBSECTIONS A THROUGH E) TO APPLY TO THE PORTION OF MAP 98 LOT 12502 THAT IS IN THE RESIDENTIAL DISTRICT. (NOTE: MAP 98 LOT 12502 HAS SINCE BEEN SUBDIVIDED.)

SALEM PLANNING BOARD

- 1) ON MARCH 9, 2017 THE SALEM PLANNING BOARD GRANTED THE FOLLOWING CONDITIONAL USE PERMITS:

- A) 490-501 B. USE - RESIDENTIAL USE IS NOT ALLOWED IN THE COMMERCIAL-INDUSTRIAL C DISTRICT
- B) 490-501 C. BUILDING SETBACK - THE MINIMUM PROPOSED BUILDING SETBACKS ARE 10' FRONT, 10' SIDE AND 10' REAR.
- C) 490-501 C. BUILDING HEIGHT - 3 STORY BUILDINGS ARE PROPOSED IN THE RESIDENTIAL DISTRICT WHERE 2½ STORIES ARE ALLOWED.

- 2) ON MARCH 9, 2017 THE SALEM PLANNING BOARD VOTED TO APPROVE THE VILLAS AT NORTH TUSCAN VILLAGE SITE PLAN SUBJECT TO THE FOLLOWING CONDITIONS:

PRIOR TO BUILDING PERMIT:

1. PAY FOR OUTSIDE INSPECTIONS PER DIRECTION OF ENGINEERING DEPT.;
2. SUBMIT STATE PERMITS/APPROVALS (SEWER EXTENSION, ALTERATION OF TERRAIN);
3. COMPLY WITH LOCAL FLOODPLAIN DEVELOPMENT REGULATIONS;
4. NOTE CONDITIONAL USE PERMITS ON PLAN;
5. SUBMIT CONSTRUCTION ACCESS PLAN;
6. NOTE NO USE OF CENTRAL STREET (BEYOND EXISTING LIMIT) UNTIL CENTRAL STREET/MAIN STREET IMPROVEMENT IS COMPLETED;
7. INSTALL WELL FOR IRRIGATION AND NOTE ON PLAN;
8. SUBMIT APPROVAL FROM ENGINEERING DIVISION PER 3/9/17 MEMO;
9. SUBMIT APPROVAL FROM ROCKINGHAM COUNTY CONSERVATION DISTRICT;
10. SUBMIT APPROVAL FROM DESIGN GUIDELINES CONSULTANT;
11. NOTE NO MORE THAN 50 UNITS TO BE BUILT PER YEAR;
12. ADD REVISED ELEVATION DRAWINGS TO PLANS;

PRIOR TO OCCUPANCY:

13. PAY IMPACT FEES - \$4577/UNIT;
  14. CONSTRUCT ALL SITE IMPROVEMENTS (INCLUDING BUILDING LOCATION, DIMENSIONS, SETBACKS, SITE GRADING, UTILITIES, DRAINAGE, LANDSCAPING, LIGHTING, PARKING SPACES) IN ACCORDANCE TO APPROVED PLAN;
  15. PROVIDE CERTIFIED AS-BUILT SITE PLAN;
  16. COMPLETE IMPROVEMENTS NOTED IN TRAFFIC MITIGATION TABLE;
- OTHER:
17. ALL REPRESENTATIONS MADE BY APPLICANT OR AGENTS AND ALL NOTES ON PLANS ARE INCORPORATED AS PART OF APPROVAL.

- 3) ON NOVEMBER 26, 2019 THE SALEM PLANNING BOARD GRANTED THE FOLLOWING CONDITIONAL USE PERMIT FOR PHASE 2:

- A) 490-501 C. BUILDING SETBACK - THE MINIMUM PROPOSED BUILDING SETBACKS ARE 13' FRONT, 10' SIDE, 18' REAR (BUILDING) AND 12' REAR (BULKHEAD).

- 4) ON NOVEMBER 26, 2019 THE SALEM PLANNING BOARD VOTED TO APPROVE THE AMENDED PHASE 2 SITE PLAN SUBJECT TO THE FOLLOWING CONDITIONS:

PRIOR TO BUILDING PERMIT:

1. SUBMIT APPROVAL FROM ENGINEERING DIV. PER 11/26/19 MEMO;
2. SUBMIT APPROVAL FROM DESIGN REVIEW CONSULTANT;
3. PAY FOR OUTSIDE INSPECTIONS PER DIRECTION OF ENGINEERING DIV.;
4. SUBMIT STATE PERMITS (SEWER EXTENSION, ALTERATION OF TERRAIN);
5. NOTE CONDITIONAL USE PERMIT FOR REDUCED BUILDING SETBACKS ON PLAN;
6. SUBMIT APPROVAL FROM ABUTTER FOR PLANTINGS OVER LOT LINE;

PRIOR TO OCCUPANCY:

7. PAY IMPACT FEES - \$5,749 PER UNIT;
8. RECORD EASEMENT FOR DRIVEWAY ON LOT 1101;
9. CONSTRUCT ALL SITE IMPROVEMENTS (INCLUDING BUILDING LOCATIONS, DIMENSIONS, AND SETBACKS, SITE GRADING, UTILITIES, DRAINAGE, LANDSCAPING, LIGHTING, PARKING SPACES) IN ACCORDANCE WITH APPROVED PLAN;
10. PROVIDE CERTIFIED AS-BUILT SITE PLAN FOR EVERY 10 UNITS;

OTHER:

11. ALL REPRESENTATIONS MADE BY APPLICANT OR AGENTS AND ALL NOTES ON PLANS ARE INCORPORATED AS PART OF APPROVAL.

- 5) ON SEPTEMBER 10, 2020 THE SALEM PLANNING BOARD GRANTED THE FOLLOWING CONDITIONAL USE PERMIT FOR PHASE 3:

- A) 490-501 C. BUILDING SETBACK - THE MINIMUM PROPOSED BUILDING SETBACKS ARE 9' FRONT, 5' SIDE, AND 14' REAR.

- 6) ON SEPTEMBER 10, 2020 THE SALEM PLANNING BOARD VOTED TO APPROVE THE AMENDED PHASE 3 SITE PLAN SUBJECT TO THE FOLLOWING CONDITIONS:

PRIOR TO BUILDING PERMIT:

1. SUBMIT APPROVAL FROM ENGINEERING DIVISION;
2. PAY FOR OUTSIDE INSPECTIONS PER DIRECTION OF ENGINEERING DIVISION;
3. SUBMIT REVISED STATE PERMIT (ALTERATION OF TERRAIN);
4. NOTE CONDITIONAL USE PERMIT FOR REDUCED BUILDING SETBACKS ON PLAN;
5. MOVE DRAINAGE EASEMENT;

PRIOR TO OCCUPANCY:

6. PAY IMPACT FEES - \$5749 PER UNIT;
7. CONSTRUCT ALL SITE IMPROVEMENTS (INCLUDING BUILDING LOCATIONS, DIMENSIONS, AND SETBACKS, SITE GRADING, UTILITIES, DRAINAGE, LANDSCAPING, LIGHTING, PARKING SPACES) IN ACCORDANCE WITH APPROVED PLAN;
8. PROVIDE CERTIFIED AS-BUILT SITE PLAN;

OTHER:

9. ALL REPRESENTATIONS MADE BY APPLICANT OR AGENTS AND ALL NOTES ON PLANS ARE INCORPORATED AS PART OF APPROVAL.

# AMENDED SITE DEVELOPMENT PLANS

## THE VILLAS AT

### NORTH TUSCAN VILLAGE

#### PHASE 3

## SALEM PROPERTY MAP 98 LOT 12542

## 11 CENTRAL STREET

## SALEM, NEW HAMPSHIRE



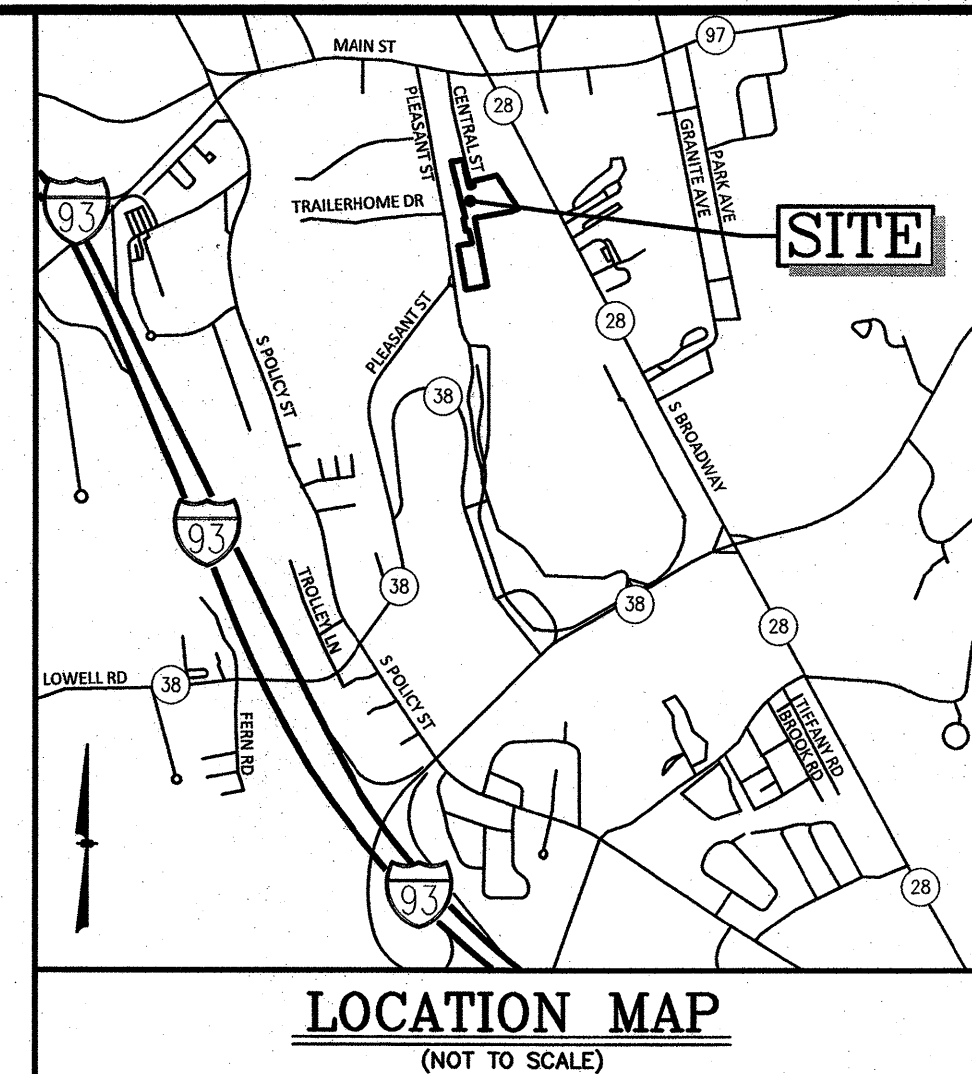
Prepared for:

**BLACK BROOK REALTY**

**TUSCAN VILLAGE NORTH, LLC**

**17 MAIN STREET**

**HOPKINTON, MASSACHUSETTS 01748**



2	REVISE SHEETS 4-8, ADD CONDITIONS OF APPROVAL	DRJ	10/7/20
1	REVISE SHEET 5	DRJ	9/1/20
NO.	DESCRIPTION	BY	DATE
REVISIONS			
TITLE SHEET			
THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3			
11 CENTRAL STREET			
SALEM, NEW HAMPSHIRE			
SALEM PROPERTY MAP 98 LOT 12542			
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC			
<b>GPI</b> Engineering Design Planning Construction Management		Greenman-Pedersen, Inc.	
603.893.0720		44 Stiles Road	
GPI.NET.COM		Suite One	
SCALE: NONE		DATE: AUGUST 18, 2020	
DESIGNED BY: DRJ		DRAWN/CHECKED: CCC/DRJ	
DWG. NAME: 4214CVR-PH3		PROJECT No. 421417	
SHEET No. 1 OF 13			

DAVID R. JORDAN No. 7778

PREPARED FOR BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC 17 MAIN STREET HOPKINTON, MA 01748 BOOK 5810-PAGE 1414

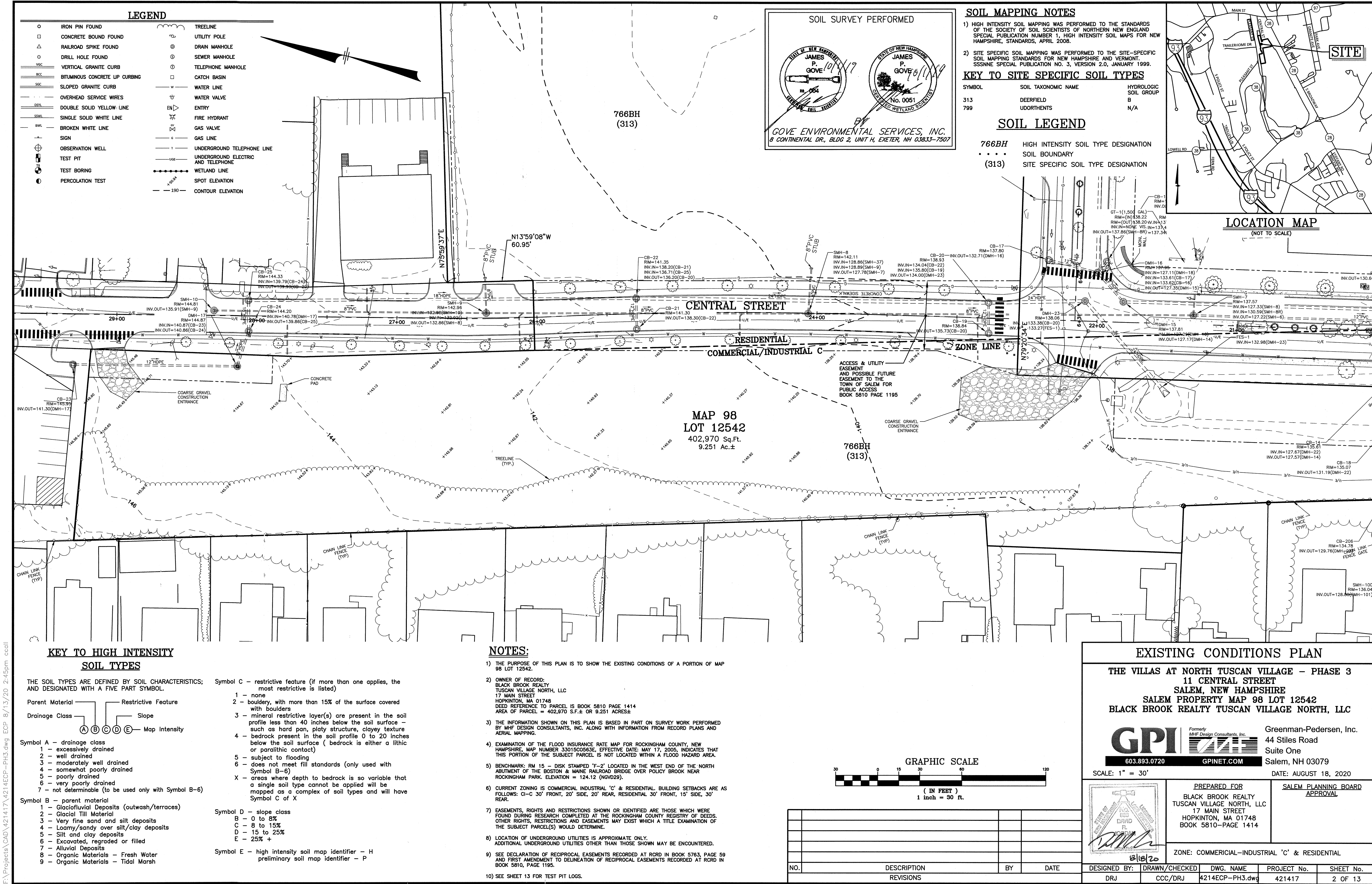
SALEM PLANNING BOARD APPROVAL

Approved 9/10/20

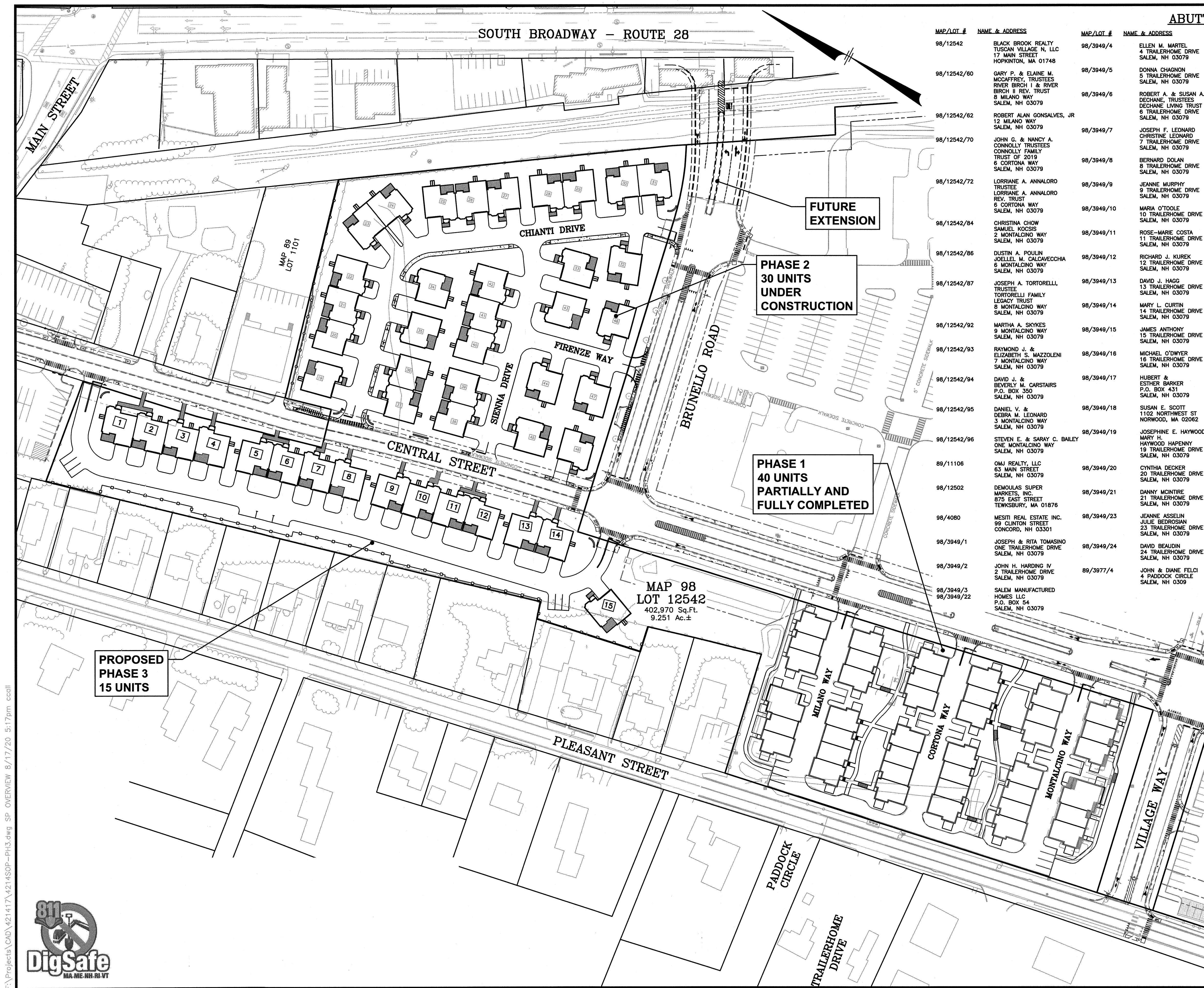
Signed 11/13/20

ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL



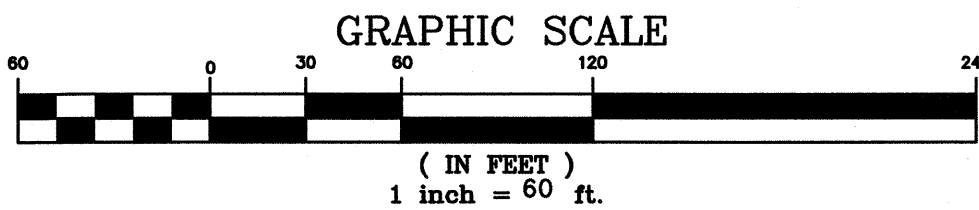






ABUTTERS

MAP/LOT #	NAME & ADDRESS	MAP/LOT #	NAME & ADDRESS	MAP/LOT #	NAME & ADDRESS	MAP/LOT #	NAME & ADDRESS
98/12542	BLACK BROOK REALTY TUSCAN VILLAGE N, LLC 17 MAIN STREET HOPKINTON, MA 01748	98/3949/4	ELLEN M. MARTEL 4 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/6	THOMAS R. & BETTE BISSONNETTE TRUSTEES T & B BISSONNETTE READY TRUST 6 PADDOCK CIRCLE SALEM, NH 03079	98/1116	M20 REAL ESTATE HOLDINGS, LLC 11 BEECHWOOD COURT ATKINSON, NH 03811
98/12542/60	GARY P. & ELAINE M. MCMAFFREY, TRUSTEES RIVER BIRCH I & RIVER BIRCH II REV. TRUST 8 MILANO WAY SALEM, NH 03079	98/3949/5	DONNA CHAGNON 5 TRAILERHOME DRIVE SALEM, NH 03079	98/3977/7	PADDOCK HOMES OF SALEM, LLC 99 MEADOW CREEK DR SALEM, NH 03079	98/1115	RONALD R. KIMBALL 27 PLEASANT STREET SALEM, NH 03079
98/12542/62	ROBERT ALAN GONSALVES, JR 12 MILANO WAY SALEM, NH 03079	98/3949/6	ROBERT A. & SUSAN A. DECHANE, TRUSTEES DECHANE LIVING TRUST 6 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/8	JOSEPH J. & RITA GOLEC 8 PADDOCK CIRCLE SALEM, NH 03079	89/1114	MARK J. & TAMMY D. DUFRESNE 25 PLEASANT STREET SALEM, NH 03079
98/12542/70	JOHN G. & NANCY A. CONNOLLY TRUSTEES CONNOLLY FAMILY TRUST OF 2019 6 CORTONA WAY SALEM, NH 03079	98/3949/7	JOSEPH F. LEONARD CHRISTINE LEONARD 7 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/10	DANIEL J. & SUSAN C. KIRKLAND 10 PADDOCK CIRCLE SALEM, NH 03079	89/1113	MARK C. DELUCA, TRUSTEE DELUCA 2013 IRREVOCABLE TRUST 26 HAWKINS GLEN DRIVE SALEM, NH 03079
98/12542/72	LORRIANE A. ANNALORO TRUSTEE LORRIANE A. ANNALORO REV. TRUST 6 CORTONA WAY SALEM, NH 03079	98/3949/8	BERNARD DOLAN 8 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/12	SUSAN A. & EUGENE PIACENTINI TRUSTEES SUSAN A. PIACENTINI - 1989 P.O. BOX 145 N. ANDOVER, MA 01845	89/1112	ANDREW BURGOS STADIE LEVESQUE 21 PLEASANT STREET SALEM, NH 03079
98/12542/84	CHRISTINA CHOW SAMUEL KOCSIS 2 MONTALCINO WAY SALEM, NH 03079	98/3949/9	JEANNE MURPHY 9 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/14	KASIE BLANCHETTE TRUSTEE BLANCHETTE FAMILY REALTY TRUST 14 PADDOCK CIRCLE SALEM, NH 03079	89/1111	CHRISTINE S. MCCARTHY 19 PLEASANT STREET SALEM, NH 03079
98/12542/86	DUSTIN A. POLUN JOELLE M. CALCAVECCHIA 6 MONTALCINO WAY SALEM, NH 03079	98/3949/10	MARIA O'TOOLE 10 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/15	WARREN T. & VIRGINIA A. MORRISON TRUSTEES WARREN T. MORRISON FAMILY TRUST 15 PADDOCK CIRCLE SALEM, NH 03079	89/1110	JAMES & JENNI FENNELLY 17 PLEASANT STREET SALEM, NH 03079
98/12542/87	JOSEPH A. TORTORELLI, TRUSTEE TORTORELLI FAMILY LEGACY TRUST 8 MONTALCINO WAY SALEM, NH 03079	98/3949/11	ROSE-MARIE COSTA 11 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/16	JOYCE E. DADOLY-GRIBBIN 16 PADDOCK CIRCLE SALEM, NH 03079	89/1109	MARY MCDONOUGH 15 PLEASANT STREET SALEM, NH 03079
98/12542/92	MARTHA A. SKYKES 9 MONTALCINO WAY SALEM, NH 03079	98/3949/12	RICHARD J. KUREK 12 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/17	JOHN E. & PATRICIA A. TOOMEY 17 PADDOCK CIRCLE SALEM, NH 03079	89/1108	COLLIN PATRICK SULLIVAN MARJORIE SULLIVAN 13 PLEASANT STREET SALEM, NH 03079
98/12542/93	RAYMOND J. & ELIZABETH S. MAZZOLENI 7 MONTALCINO WAY SALEM, NH 03079	98/3949/13	DAVID J. HAGG 13 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/18	SILVANA HOFFMAN TRUSTEE SILVANA HOFFMAN REV. TRUST OF 2015 18 PADDOCK CIRCLE SALEM, NH 03079	89/1107	WALTER A. & GERALDINE POWELL 11 PLEASANT STREET SALEM, NH 03079
98/12542/94	DAVID J. & BEVERLY M. CARSTAIRS P.O. BOX 350 SALEM, NH 03079	98/3949/14	MARY L. CURTIN 14 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/19	JOHN E. & PATRICIA A. TOOMEY 17 PADDOCK CIRCLE SALEM, NH 03079	89/1106	THOMAS J. SANTOS 26A CLINTON STREET SALEM, NH 03079
98/12542/95	DANIEL V. & DEBRA M. LEONARD 3 MONTALCINO WAY SALEM, NH 03079	98/3949/15	JAMES ANTHONY 15 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/20	VALERIE GILLET 20 PADDOCK CIRCLE SALEM, NH 03079	89/1105	EDWARD & LINDA GOODWIN TRUSTEES EDWARD & LINDA GOODWIN FAMILY TRUST 5 PLEASANT STREET SALEM, NH 03079
98/12542/96	STEVEN E. & SARAY C. BAILEY ONE MONTALCINO WAY SALEM, NH 03079	98/3949/16	MICHAEL O'DWYER 16 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/21	MARCIA MICHAUD 21 PADDOCK CIRCLE SALEM, NH 03079	89/1099	GRANITE STATE ELECTRIC COMPANY LIBERTY UTILITIES ATTN ACCOUNTS PAYABLE DEPARTMENT 15 BUTTRICK ROAD LONDONDERRY, NH 03053
89/11106	OMI REALTY, LLC 63 MAIN STREET SALEM, NH 03079	98/3949/17	HUBERT & ESTHER PARKER P.O. BOX 431 SALEM, NH 03079	89/3977/22	KENNETH R. HAYNES TRUSTEE GERALDINE HAYNES TRUSTEE HAYNES FAMILY 2015 TRUST 22 PADDOCK CIRCLE SALEM, NH 03079	89/1100	JOSEPH & JANIS CHABOT TRUSTEES 7 CENTRAL STREET REALTY TRUST 7 CENTRAL STREET SALEM, NH 03079
98/12502	DEMOULAS SUPER MARKETS, INC. 875 EAST STREET TEWKSBURY, MA 01876	98/3949/18	SUSAN E. SCOTT 1102 NORTHWEST ST NORWOOD, MA 02062	89/3977/23	LOUIS & KATHERINE SCIBELLI 23 PADDOCK CIRCLE SALEM, NH 03079	89/1101/1	JANICE L. HALE 9 CENTRAL STREET UNIT A SALEM, NH 03079
98/4080	MESITI REAL ESTATE INC. 99 CLINTON STREET CONCORD, NH 03301	98/3949/19	JOSEPHINE E. HAYWOOD MARY H. HAYWOOD HAPPENNY 19 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/24	RAYMOND L. & DORIS T. PETTY 28 PLEASANT STREET SALEM, NH 03079	89/1101/2, 3, 4, 5, 7	STATE OF NH DOT JOHN O'MORTON BUILDING ONE HAZEN DRIVE CONCORD, NH 03302
98/3949/1	JOSEPH & RITA TOMASINO ONE TRAILERHOME DRIVE SALEM, NH 03079	98/3949/20	CYNTHIA DECKER 20 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/25		89/1101/8	PAULA N. ANDERSON P.O. BOX 1012 SALEM, NH 03079
98/3949/2	JOHN H. HARDING IV 2 TRAILERHOME DRIVE SALEM, NH 03079	98/3949/21	DANNY MCINTIRE 21 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/26		151/12213	
98/3949/3	SALEM MANUFACTURED HOMES LLC P.O. BOX 54 SALEM, NH 03079	98/3949/22	JEANNE ASSELIN JULIE BEDROSIAN 23 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/27			
98/3949/22		98/3949/23	DAVID BEAUDIN 24 TRAILERHOME DRIVE SALEM, NH 03079	89/3977/28			
		98/3949/24	JOHN & DIANE FELCI 4 PADDOCK CIRCLE SALEM, NH 03079	89/3977/29			



NO.	DESCRIPTION	BY	DATE


SITE OVERVIEW PLAN

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

**GPI**  
Engineering  
Design  
Planning  
Construction Management  
603.893.0720  
GPINET.COM

Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079

SCALE: 1" = 60' DATE: AUGUST 18, 2020

	PREPARED FOR BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC 17 MAIN STREET HOPKINTON, MA 01748 BOOK 5810—PAGE 1414		SALEM PLANNING BOARD APPROVAL	
	ZONE: COMMERCIAL—INDUSTRIAL 'C' & RESIDENTIAL			
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SOP—PH3	421417	3 OF 13



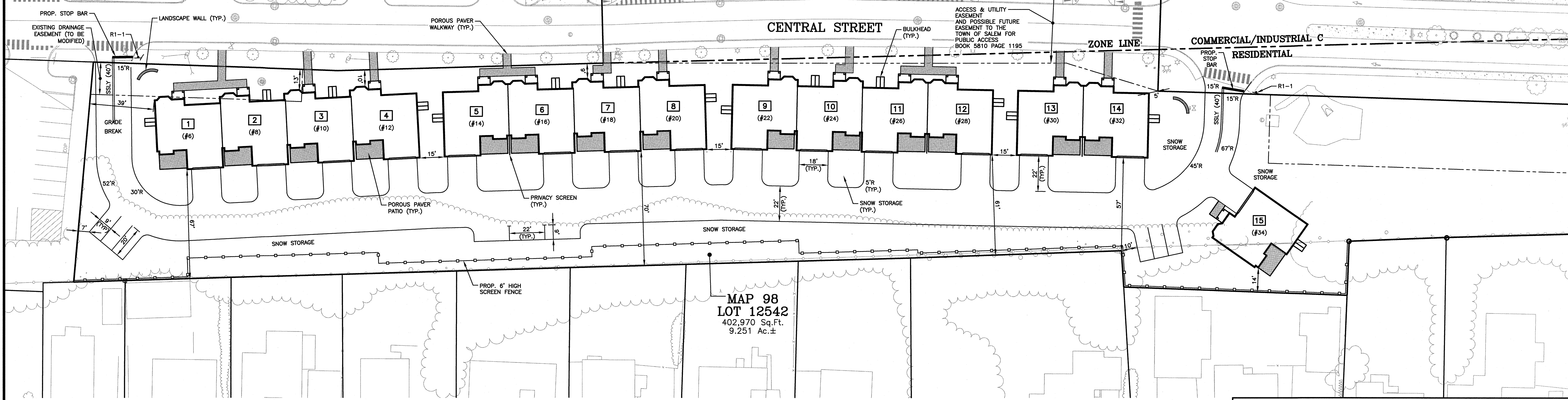
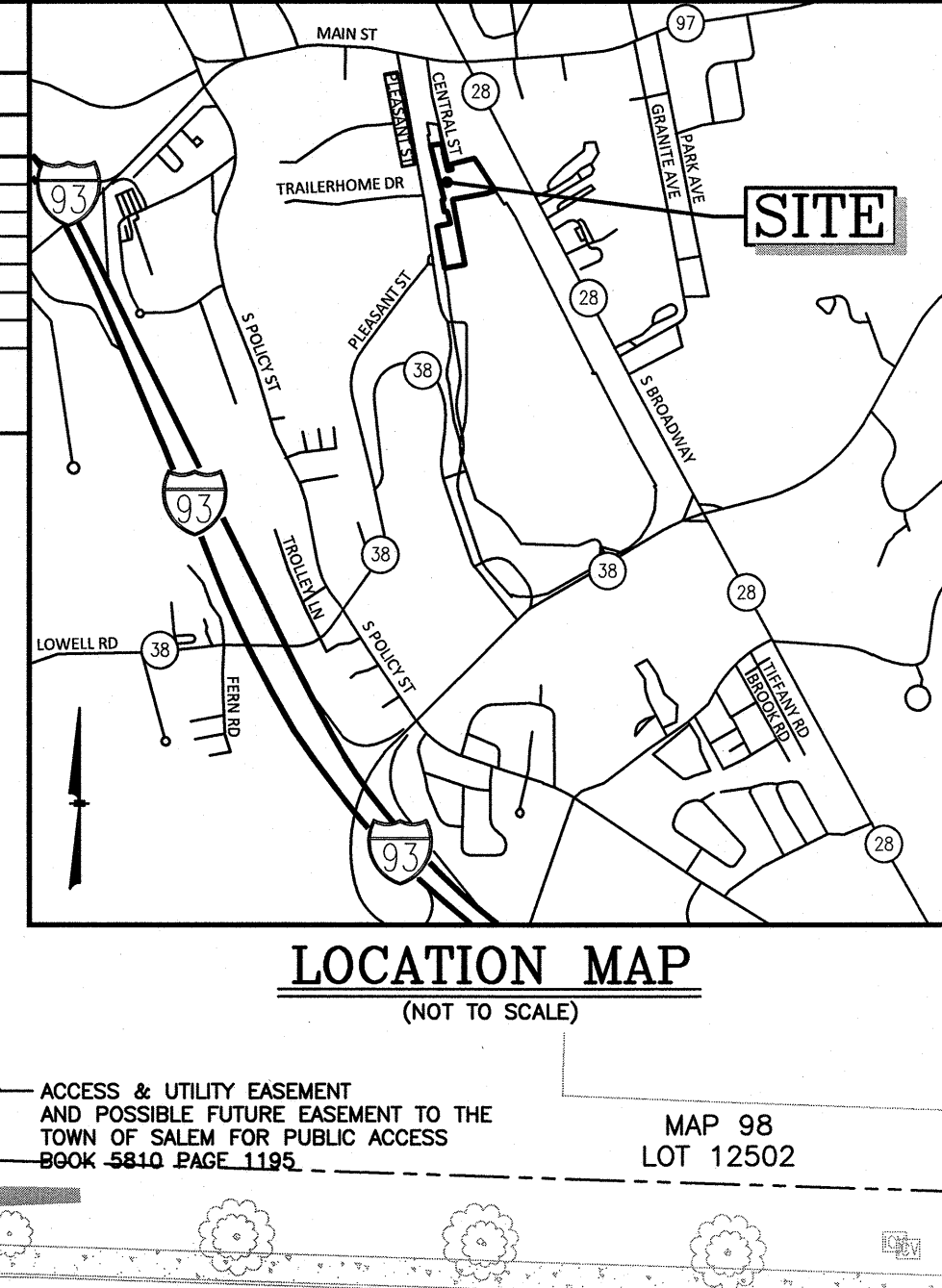


MAP 89  
LOT 1101

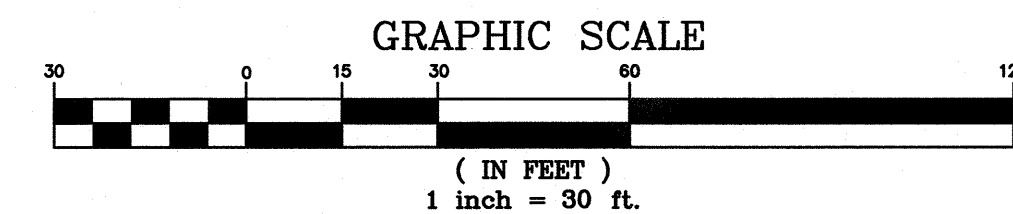
CHIANTI DRIVE

19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

\* CONDITIONAL USE PERMIT TO BE REQUESTED  
 \*\* 58 TOTAL UNITS WITHIN RESIDENTIAL PORTION OF LOT 12542 (62,282 SF BLDG./233,079 SF LOT AREA)



- 9) ALL PAVEMENT MARKINGS SHALL CONFORM TO THE MUTCD, LATEST EDITION.
- 10) SNOW STORAGE WILL BE PROVIDED ALONG ROAD OUTSIDE OF RAIN GARDENS. ANY EXCESS SNOW SHALL BE TRUCKED OFF-SITE AND DISPOSED OF IN ACCORDANCE WITH THE TOWN OF SALEM AND NHDES REQUIREMENTS.
- 11) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY MHF DESIGN CONSULTANTS, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SUPERVISOR AND/OR SEAL OF THE CONTRACTOR AS USED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REQUIREMENTS.
- 12) ANY ROOFTOP OR GROUND LEVEL MECHANICAL UNITS SHALL BE SCREENED FROM PUBLIC VIEW.
- 13) TRASH DISPOSAL SHALL BE INTERNAL TO EACH UNIT.
- 14) THE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR SNOW REMOVAL AND TRASH DISPOSAL.



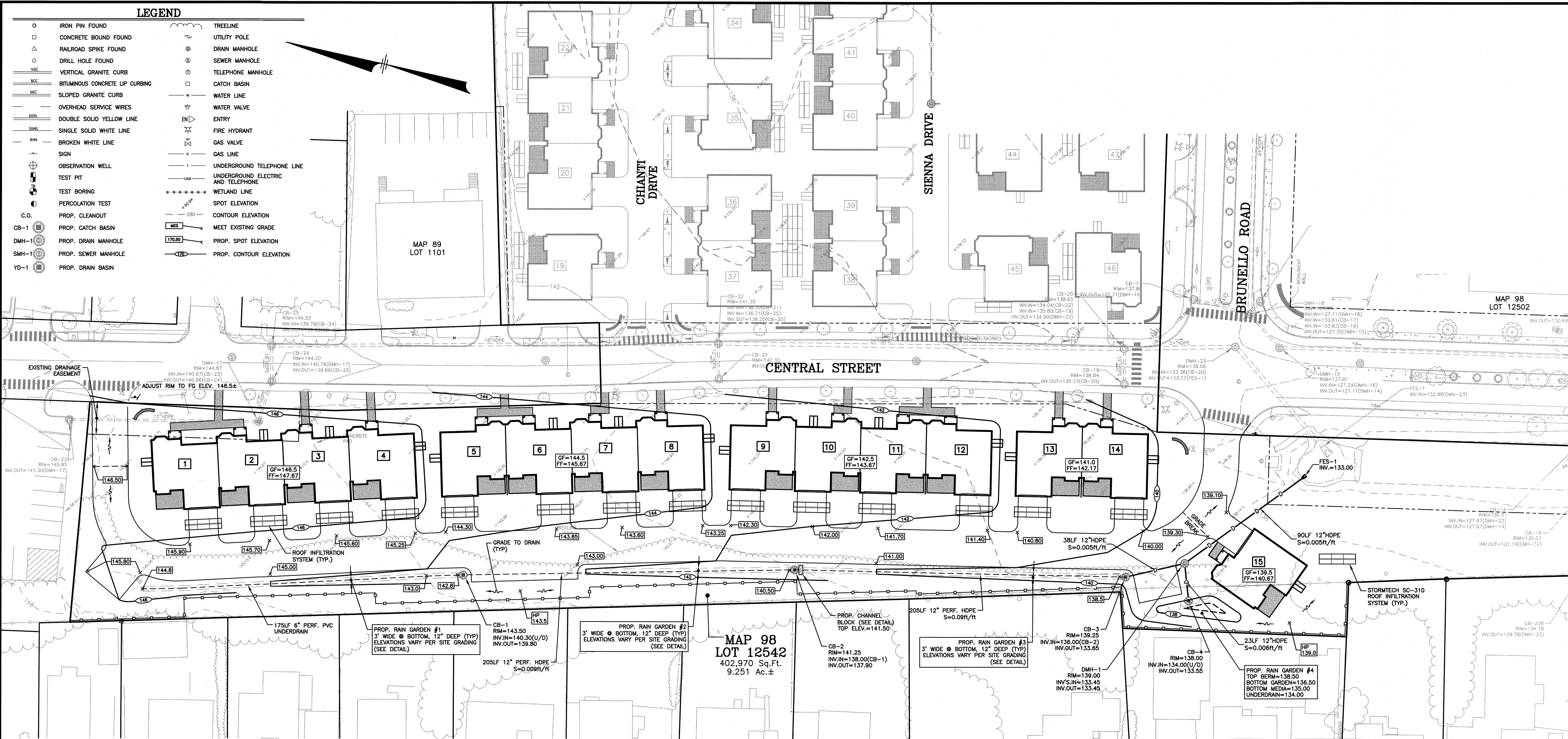
1	RELOCATE LANDSCAPE WALLS	DRJ	10/7/20
NO.	DESCRIPTION	BY	DATE
REVISIONS			

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	4 OF 13



## LEGEND

○	IRON PIN FOUND	—	TREELINE
□	CONCRETE BOUND FOUND	—	UTILITY POLE
△	RAILROAD SPIKE FOUND	—	DRAIN MANHOLE
○	DRILL HOLE FOUND	—	SEWER MANHOLE
—	VERTICAL GRANITE CURB	—	TELEPHONE MANHOLE
—	BITUMINOUS CONCRETE LIP CURBING	—	CATCH BASIN
—	SLOPED GRANITE CURB	—	WATER LINE
—	OVERHEAD SERVICE WIRES	—	WATER VALVE
—	DOUBLE SOLID YELLOW LINE	—	ENTRY
—	SINGLE SOLID WHITE LINE	—	FIRE HYDRANT
—	BROKEN WHITE LINE	—	GAS VALVE
—	SIGN	—	GAS LINE
—	OBSERVATION WELL	—	UNDERGROUND TELEPHONE LINE
—	TEST PIT	—	UNDERGROUND ELECTRIC AND TELEPHONE
—	TEST BORING	—	WETLAND LINE
—	PERCOLATION TEST	—	SPOT ELEVATION
—	PROP. CLEANOUT	—	CONTOUR ELEVATION
—	PROP. CATCH BASIN	—	MEET EXISTING GRADE
—	PROP. DRAIN MANHOLE	—	PROP. SPOT ELEVATION
—	PROP. SEWER MANHOLE	—	PROP. CONTOUR ELEVATION
—	PROP. DRAIN BASIN		

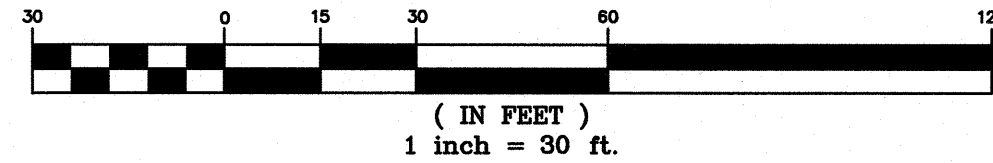


## NOTES

- ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF SALEM, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE WITH THE OWNER OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
- ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN THE PLANS THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THE DETAILS PROVIDED SHALL SERVE AS A GUIDE ONLY. ADDITIONAL MEASURES MAY NEED TO BE EMPLOYED DURING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION. ELEVATIONS ARE BASED ON NGVD 1929 DATUM.
- THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE DIGGING.
- CONTRACTOR SHALL DISPOSE OF ANY UNSUITABLE MATERIAL FOUND ONSITE (I.E. TRASH, STUMPS, ETC.) IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. CONTRACTOR SHALL COORDINATE ALL WORK WITH SUBCONTRACTORS, UTILITY COMPANIES, AND THE TOWN OF SALEM, AND SHALL BE RESPONSIBLE FOR COORDINATION OF ALL PERMITS, INSPECTIONS, AND MAINTENANCE AND PROTECTION OF ALL TRAFFIC AND PEDESTRIANS. ANY DISCREPANCIES FOUND OR SHOWN SHALL BE RESOLVED BY THE CONTRACTOR.

- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT HE HAS THE MOST RECENT SET OF PLANS. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
- CONTRACTOR SHALL CONFIRM WITH ENGINEER ALL LAYOUT ITEMS NOT SHOWN OR ANNOTATED. THE LOCATION OF ALL STRUCTURES AND UTILITIES SHALL BE CONFIRMED PRIOR TO LAYOUT OF PAVED AREAS. EXACT LOCATION OF PAVEMENT SHALL BE CONFIRMED WITH ENGINEER PRIOR TO PLACEMENT OF BINDER COURSE PAVEMENT.
- SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL INFORMATION.
- ALL UTILITIES SHALL BE UNDERGROUND, PER TOWN OF SALEM AND UTILITY COMPANY STANDARDS.
- ALL DRAINAGE PIPE DATA CALCULATED TO STRUCTURE CENTERS, TYP.
- ALL DRAINAGE PIPE SHALL CONFORM TO ADS N12 MINIMUM STANDARDS (OR EQUAL).
- ALL YARD DRAINS SHALL BE 24" NYLOPLAST DRAIN BASINS WITH DOMED GRATE AS MANUFACTURED BY ADS, INC. (OR EQUAL).
- AN OPERATION AND MAINTENANCE MANUAL HAS BEEN PREPARED FOR THE ON-SITE STORMWATER MANAGEMENT SYSTEMS AND IS CONSIDERED PART OF THIS PLAN SET. THE PROPERTY OWNER SHALL COMPLY WITH THE INSPECTION AND MAINTENANCE SCHEDULE AND RECORD KEEPING REQUIREMENTS CONTAINED THEREIN.
- ALL BUILDING ROOFTOPS SHALL BE CONNECTED TO UNDERGROUND ROOF INFILTRATION SYSTEMS (STORMTECH SC-310 OR APPROVED EQUAL). (6) SC-310 CHAMBERS REQUIRED PER UNIT. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.

## GRAPHIC SCALE



NO.	DESCRIPTION	BY	DATE
2	RELOCATE LANDSCAPE WALLS	DRJ	10/7/20
1	ADD SPOT GRADE AND CHANNEL BLOCK ELEV.	DRJ	9/1/20
REVISIONS			

## GRADING &amp; DRAINAGE PLAN

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

**GPI**

Engineering  
Design  
Planning  
Construction Management

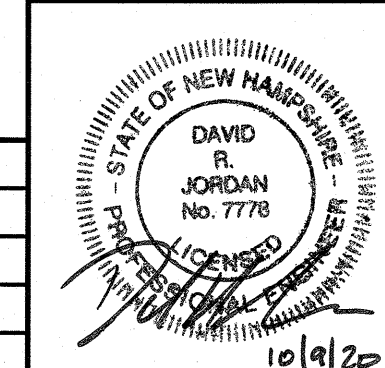
603.893.0720

GPI.NET.COM

Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079

SCALE: 1" = 30'

DATE: AUGUST 18, 2020



PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810-PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL

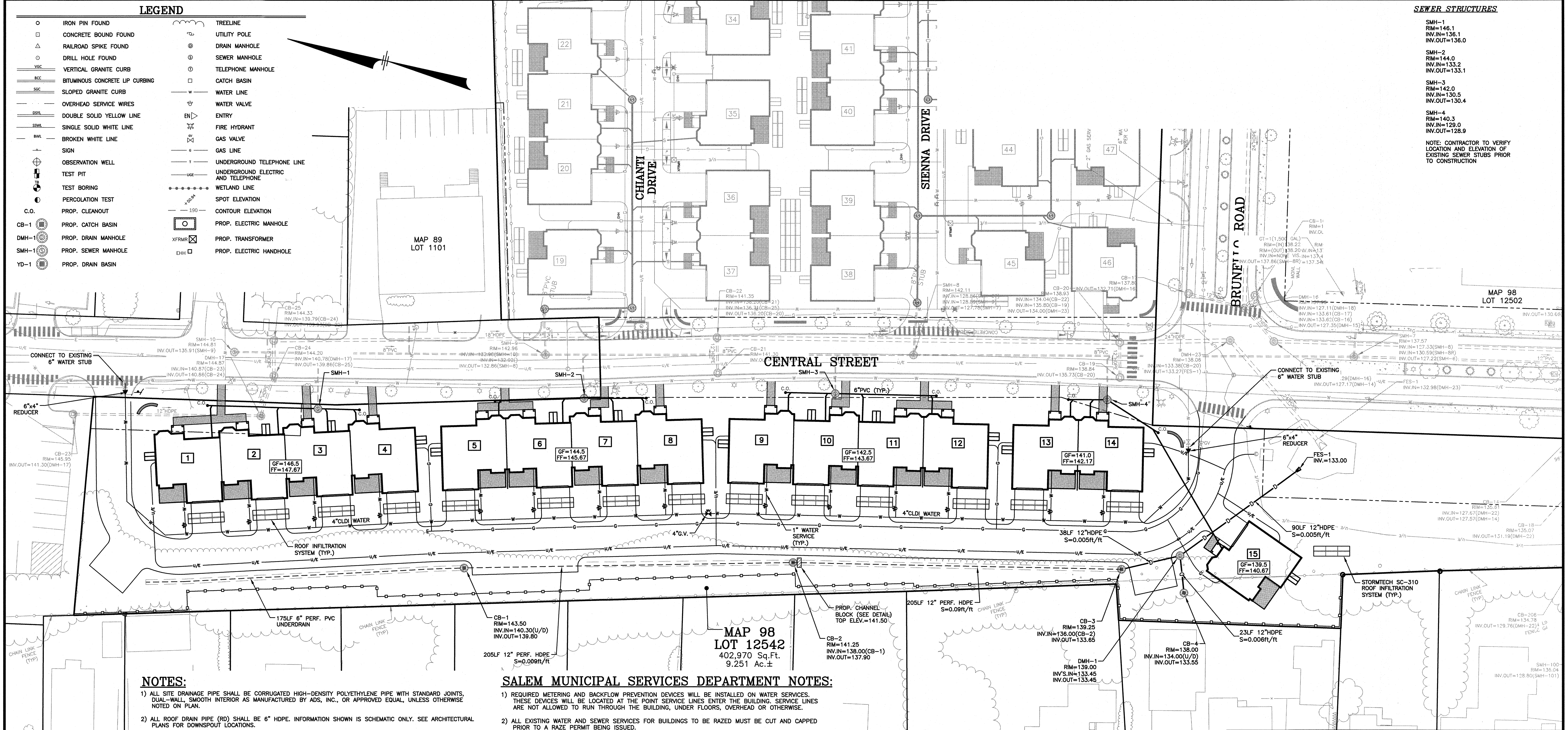
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	5 OF 13





# LEGEND

○	IRON PIN FOUND	—	TREELINE
□	CONCRETE BOUND FOUND	—	UTILITY POLE
△	RAILROAD SPIKE FOUND	—	DRAIN MANHOLE
○	DRILL HOLE FOUND	—	SEWER MANHOLE
—	VERTICAL GRANITE CURB	—	TELEPHONE MANHOLE
—	BCC BITUMINOUS CONCRETE LIP CURBING	—	CATCH BASIN
—	SGC SLOPED GRANITE CURB	—	WATER LINE
—	OVERHEAD SERVICE WIRES	—	WATER VALVE
—	DOYL DOUBLE SOLID YELLOW LINE	—	ENTRY
—	SWL SINGLE SOLID WHITE LINE	—	FIRE HYDRANT
—	BWL BROKEN WHITE LINE	—	GAS VALVE
—	SIGN	—	GAS LINE
—	OBSERVATION WELL	—	UNDERGROUND TELEPHONE LINE
—	TEST PIT	—	UNDERGROUND ELECTRIC AND TELEPHONE LINE
—	TEST BORING	—	WETLAND LINE
—	PERCOLATION TEST	—	SPOT ELEVATION
—	C.O. PROP. CLEANOUT	—	CONTOUR ELEVATION
—	CB-1 PROP. CATCH BASIN	—	PROP. ELECTRIC MANHOLE
—	DMH-1 PROP. DRAIN MANHOLE	—	PROP. TRANSFORMER
—	SMH-1 PROP. SEWER MANHOLE	—	PROP. ELECTRIC HANDHOLE
—	YD-1 PROP. DRAIN BASIN		



## SEWER STRUCTURES

SMH-1	RM=146.1
INV.IN=136.1	INV.OUT=136.0
SMH-2	RM=144.0
INV.IN=133.2	INV.OUT=133.1
SMH-3	RM=142.0
INV.IN=130.5	INV.OUT=130.4
SMH-4	RM=140.3
INV.IN=129.0	INV.OUT=128.9

NOTE: CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SEWER STUBS PRIOR TO CONSTRUCTION

## NOTES:

- ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS. QUAL-WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
- ALL ROOF DRAIN PIPE (RD) SHALL BE 6" HDPE. INFORMATION SHOWN IS SCHEMATIC ONLY. SEE ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS.
- ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.
- ALL WATER MAIN SHALL BE CEMENT LINED DUCTILE IRON, UNLESS OTHERWISE NOTED. ALL WATER SERVICES SHALL BE COPPER.
- ELEVATIONS ARE BASED ON NGVD 1929 DATUM.
- ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
- ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LOCAL AUTHORITIES AND THE DEVELOPER PRIOR TO INSTALLATION.
- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE TOWN, STATE AND FEDERAL STANDARDS.
- THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (1-888-344-7233) PRIOR TO COMMENCING ANY EXCAVATION.
- ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO APPLICABLE MUNICIPAL SERVICES DEPARTMENT AND NHDES SPECIFICATIONS.
- ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.
- ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL MSD AND REMOVED.
- ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND SALEM MUNICIPAL SERVICES DEPARTMENT, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE LOCATION AND ELEVATION OF ALL PROPOSED BUILDING UTILITY CONNECTIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL PLANS.
- SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAINS.

## SALEM MUNICIPAL SERVICES DEPARTMENT NOTES:

- REQUIRED METERING AND BACKFLOW PREVENTION DEVICES WILL BE INSTALLED ON WATER SERVICES. THESE DEVICES WILL BE LOCATED AT THE POINT SERVICE LINES ENTER THE BUILDING. SERVICE LINES ARE NOT ALLOWED TO RUN THROUGH THE BUILDING, UNDER FLOORS, OVERHEAD OR OTHERWISE.
- ALL EXISTING WATER AND SEWER SERVICES FOR BUILDINGS TO BE RAZED MUST BE CUT AND CAPPED PRIOR TO A RAZE PERMIT BEING ISSUED.
- DOMESTIC WATER SERVICES MAY BE TAPPED OFF FIRE SPRINKLER SERVICES, PROVIDED THE DOMESTIC SERVICE IS TAPPED A MINIMUM OF TEN FEET OUTSIDE THE BUILDING. VALVES ARE REQUIRED ON BOTH SERVICE LINES, WITH A VALVE IN THE FIRE SERVICE DOWNSTREAM OF THE DOMESTIC SERVICE TAP. THESE VALVES SHOULD BE LOCATED A MINIMUM FIVE FEET FROM THE BUILDING.

## SALEM FIRE DEPARTMENT NOTES:

- BUILDINGS SHALL BE PROVIDED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13D AND SALEM FIRE/UTILITIES REGULATIONS.
- ALL SITE AND CONSTRUCTION PLANS MAY BE REVIEWED BY A THIRD PARTY CONSULTANT OF THE TOWNS CHOOSING. ALL COST ASSOCIATED WITH THIRD PARTY REVIEWS AND INSPECTION SHALL BE PAID BY THE DEVELOPER.
- UNDERGROUND WATER MAINS AND HYDRANTS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE 2000 EDITION, APPENDIX B AND C, AND SALEM WATER DEPARTMENT REGULATIONS. FLOW CALCULATIONS AND BUILDING CONSTRUCTION CLASSIFICATION SHALL BE INCLUDED WITH THE SITE PLAN.
- PLANS FOR CONSTRUCTION OF BUILDINGS AND FIRE PROTECTION SYSTEMS SHALL BE SUBMITTED TO THE SALEM FIRE DEPARTMENT AND RELEASED FOR CONSTRUCTION PRIOR TO STARTING WORK. ALL CONTRACTORS INSTALLING FIRE PROTECTION SYSTEMS SHALL HOLD A CERTIFICATE OF FITNESS FROM THE SALEM FIRE DEPARTMENT.
- ALL UNDERGROUND WATER MAINS SERVING SPRINKLER OR STANDPIPE SYSTEM SHALL BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND SHALL BE WITNESSED BY SALEM FIRE DEPARTMENT PERSONNEL.
- ALL BUILDINGS THREE OR MORE STORIES IN HEIGHT ABOVE THE LEVEL OF FIRE DEPARTMENT ACCESS AS DETERMINED BY THE FIRE DEPARTMENT SHALL BE PROVIDED WITH CLASS I STANDPIPES DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 14, 2003 EDITION.

## ESTIMATE OF PROPOSED WATER USAGE:

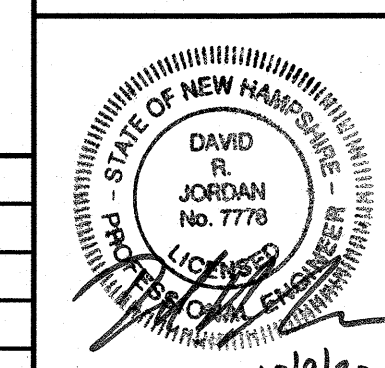
15 2-BEDROOM UNITS x 150 GPD/BEDROOM = 4,500 GPD

## UTILITY PLAN

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

**GPI**  
Engineering  
Design  
Planning  
Construction Management  
603.893.0720  
GPINET.COM

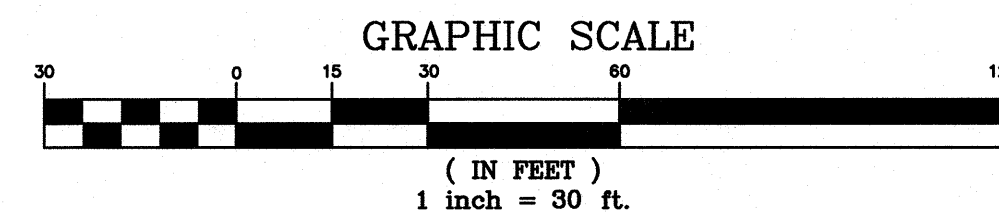
Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079  
DATE: AUGUST 18, 2020



PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810-PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL

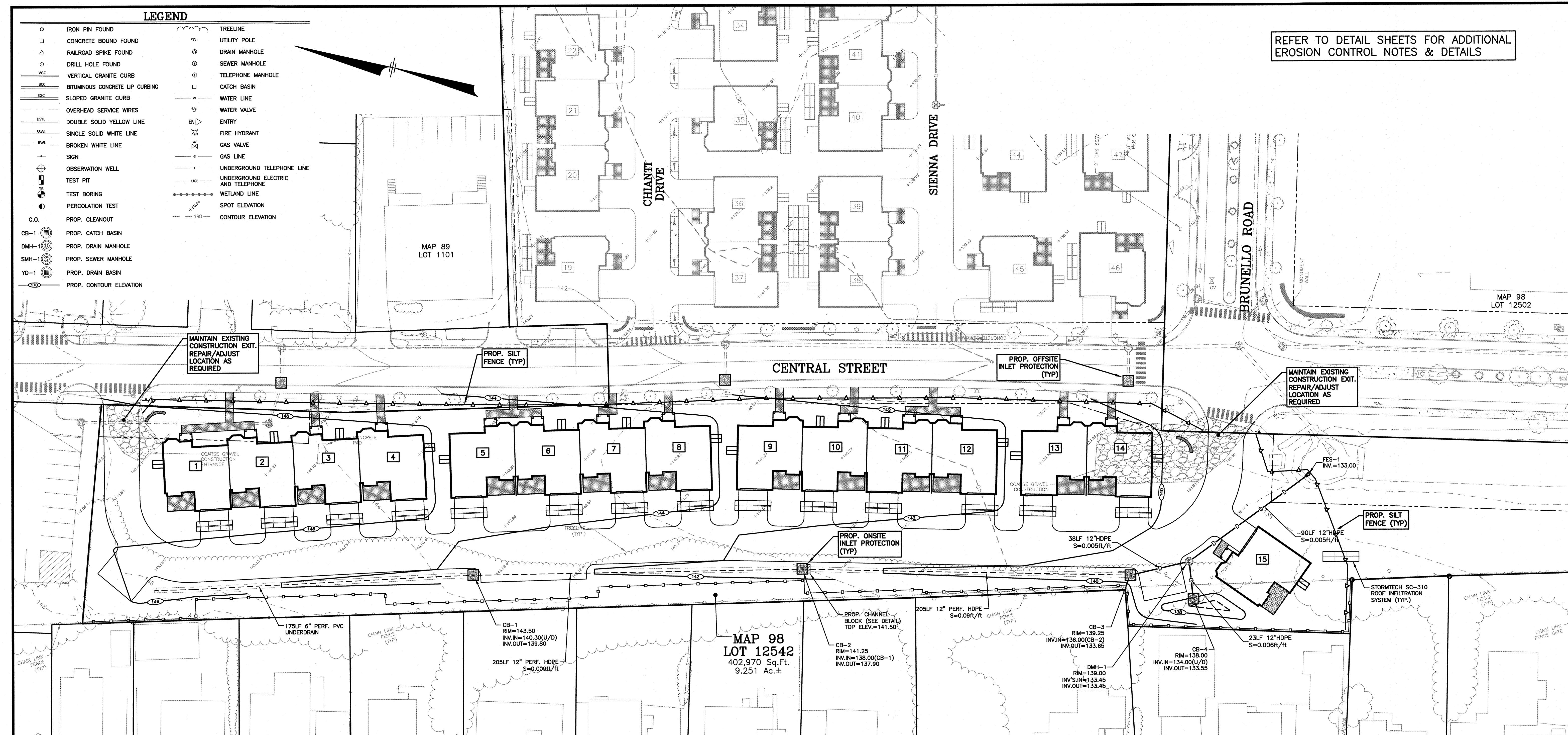


NO.	REVISIONS	DESCRIPTION	BY	DATE
1	REVISIONS PER SALEM ENGINEERING COMMENTS		DRJ	10/7/20

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	6 OF 13







LEGEND

- IRON PIN FOUND
- CONCRETE BOUND FOUND
- △ RAILROAD SPIKE FOUND
- DRILL HOLE FOUND
- VSGC — VERTICAL GRANITE CURB
- BGC — BITUMINOUS CONCRETE LIP CURBING
- SGC — SLOPED GRANITE CURB
- — OVERHEAD SERVICE WIRES
- DSYL — DOUBLE SOLID YELLOW LINE
- SSWL — SINGLE SOLID WHITE LINE
- BWL — BROKEN WHITE LINE
- — SIGN
- — OBSERVATION WELL
- — TEST PIT
- — TEST BORING
- — PERCOLATION TEST
- — C.O.
- — CB-1
- — DMH-1
- — SMH-1
- — YD-1
- — PROP. CLEANOUT
- — PROP. CATCH BASIN
- — PROP. DRAIN MANHOLE
- — PROP. SEWER MANHOLE
- — PROP. DRAIN BASIN
- — PROP. CONTOUR ELEVATION
- — TREE LINE
- — UTILITY POLE
- — DRAIN MANHOLE
- — SEWER MANHOLE
- — TELEPHONE MANHOLE
- — CATCH BASIN
- — WATER LINE
- — WATER VALVE
- — ENTRY
- — FIRE HYDRANT
- — GAS VALVE
- — GAS LINE
- — UNDERGROUND TELEPHONE LINE
- — UNDERGROUND ELECTRIC AND TELEPHONE
- — WETLAND LINE
- — SPOT ELEVATION
- — 190 — CONTOUR ELEVATION

REFER TO DETAIL SHEETS FOR ADDITIONAL  
EROSION CONTROL NOTES & DETAILS

BRUNELLO ROAD

CHIANTI DRIVE

SIENNA DRIVE

CENTRAL STREET

MAP 89  
LOT 1101

MAP 98  
LOT 12502

MAP 98  
LOT 12542  
402,970 Sq.Ft.  
9.251 Ac.±

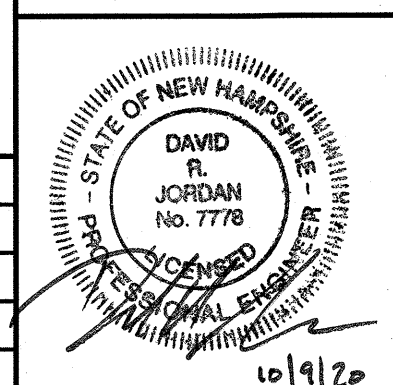
EROSION CONTROL PLAN

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

**GPI** Engineering Design Planning Construction Management  
603.893.0720 GPINET.COM  
Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079

SCALE: 1" = 30'

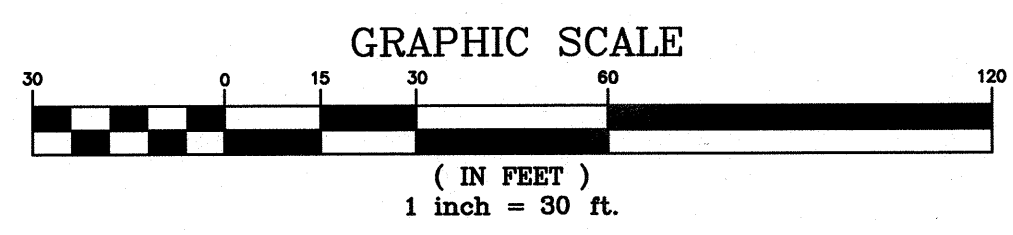
DATE: AUGUST 18, 2020



PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810-PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL



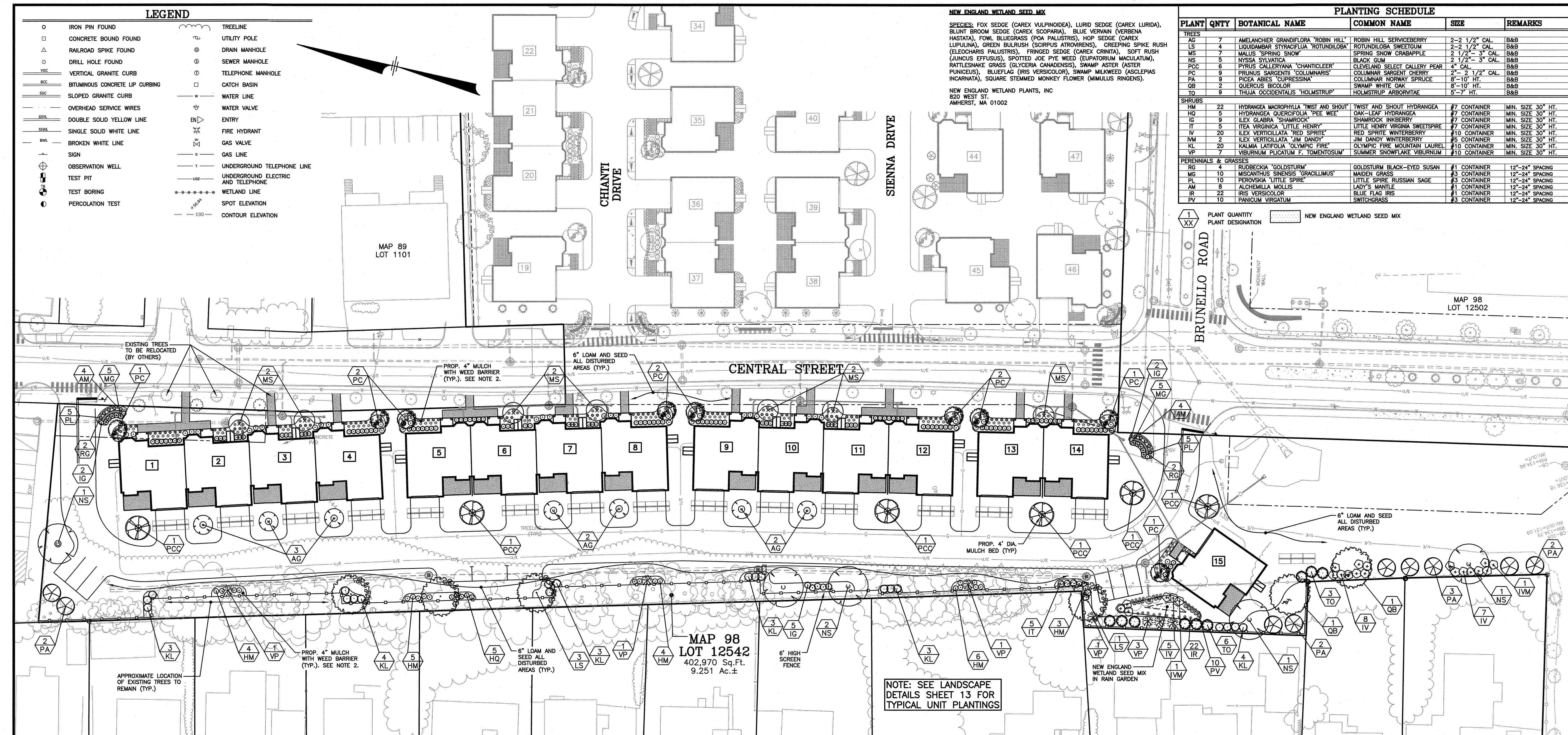
NO.	DESCRIPTION	BY	DATE
1	RELOCATE LANDSCAPE WALLS	DRJ	10/7/20
REVISIONS			

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	7 OF 13



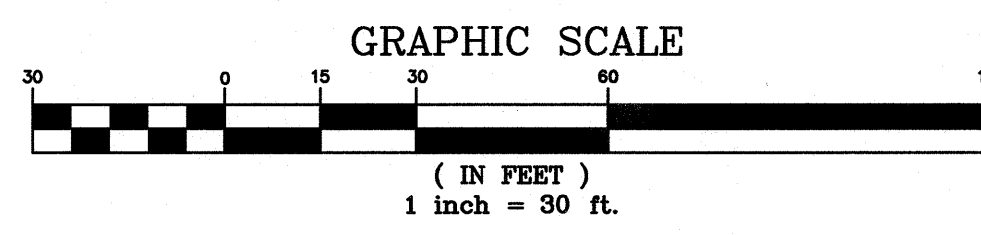
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NOTES:

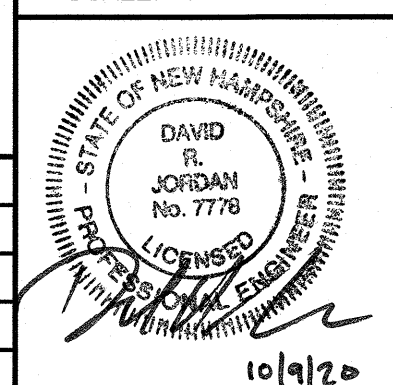
- ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 - NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSEYMEN, INC.).
- 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
- PLANT PIT BACKFILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PART OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON-SITE TOPSOIL AS PART OF BACKFILL WHEN AVAILABLE.
- ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH 6" LOAM AND SEED AS SPECIFIED BELOW.
- ALL SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.
- APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:  
LIMESTONE: 100 LBS./1,000 SQUARE FEET.  
FERTILIZER: 500 LBS./ACRE OF 10-20-20 OR 1000 LBS./ACRE OF 5-10-10.  
MULCH: HAY MULCH APPROXIMATELY 3 TONS/ACRE  
SEED MIX (SLOPES LESS THAN 4:1) LBS./ACRE  
CREEPING RED FESCUE 20  
TALL FESCUE 15  
PERENNIAL RYEGRASS 5  
REDDTOP 2  
SLOPE MIX (SLOPES GREATER THAN 4:1) LBS./ACRE  
CREEPING RED FESCUE 20  
TALL FESCUE 20  
BIRDSFOOT TREEFOIL 8  
48
- FOR TEMPORARY EROSION CONTROL NOTES, SEE DETAIL SHEET.
- NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
- ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND CITY PRIOR TO INSTALLATION.
- CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, ROTOTILL, STRIP AND STOCKPILE ALL ON-SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
- FOR SEED AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE-UTILIZED FROM ON-SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.
- PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE OF THE DEVELOPER.
- THE CONTRACTOR SHALL DIG ROOT BALLS FOR TRANSPLANTED ITEMS TO THE DIMENSIONS OUTLINED IN THE NURSERY STOCK SPECIFICATIONS MANUAL (SEE NOTE #1).
- THE CONTRACTOR SHALL TAKE EXTREME CAUTION TO MINIMIZE DAMAGE TO ROOT SYSTEMS DURING DIGGING AND TRANSPLANTING. ROOT BALLS OF TRANSPLANTS SHALL BE WRAPPED IN BURLAP (WHICH SHALL BE REMOVED UPON RE-PLANTING) AND KEPT MOIST.
- EXPOSED SOILS SHALL BE SEEDDED OR HAY MULCHED WITHIN 72 HOURS OF FINAL GRADING.
- THE CONTRACTOR SHALL INSTALL AN IRRIGATION SYSTEM TO PROVIDE COMPLETE COVERAGE OF ALL SEED AREAS AND SHRUB BEDS. THE SYSTEM SHALL INCLUDE A TIMER AND SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES. IRRIGATION WATER TO BE PROVIDED BY AN ON-SITE WELL. MUNICIPAL WATER SHALL NOT BE USED FOR IRRIGATION.
- THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (1-888-344-7233) PRIOR TO COMMENCING ANY EXCAVATION.
- PATIO SCREENING IF REQUESTED BY THE UNIT OWNER, SHALL CONSIST OF 5'-6" HT. (AT TIME OF PLANTING) ARBORVITAE, OR EVERGREEN SHRUBS, OR A WHITE VINYL SCREEN FENCE SEGMENT AT THE UNIT OWNER'S DISCRETION.
- THE LANDSCAPE ARCHITECT SHALL REVIEW THE CONDITION AND LOCATION OF ALL PLANTINGS PRIOR TO INSTALLATION.



LANDSCAPE PLAN

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

GPI Engineering Design Planning Construction Management  
603.893.0720 GPINET.COM  
Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079  
DATE: AUGUST 18, 2020



PREPARED FOR  
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TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
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BOOK 5810-PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

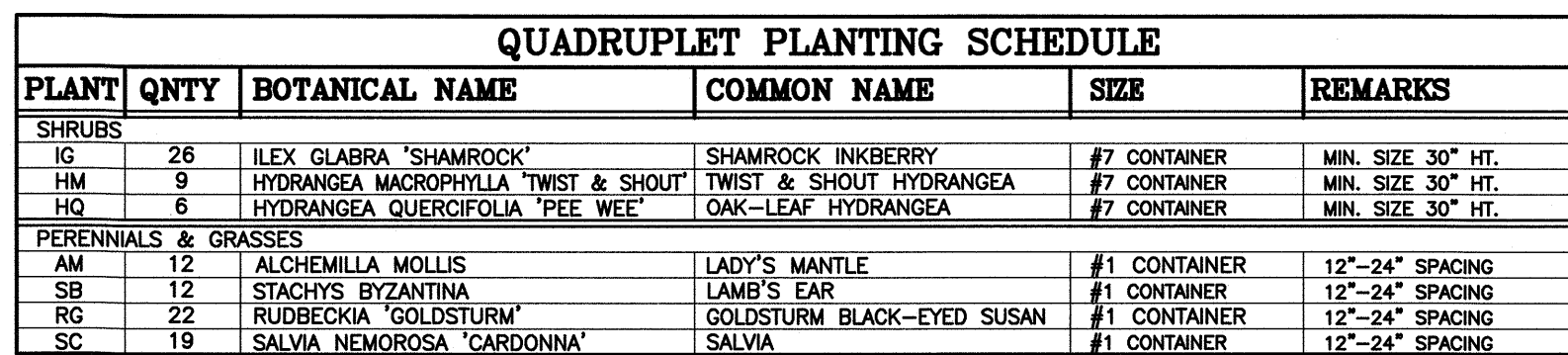
ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL

1	RELOCATE LANDSCAPE WALLS	DRJ	10/7/20
NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	8 OF 13



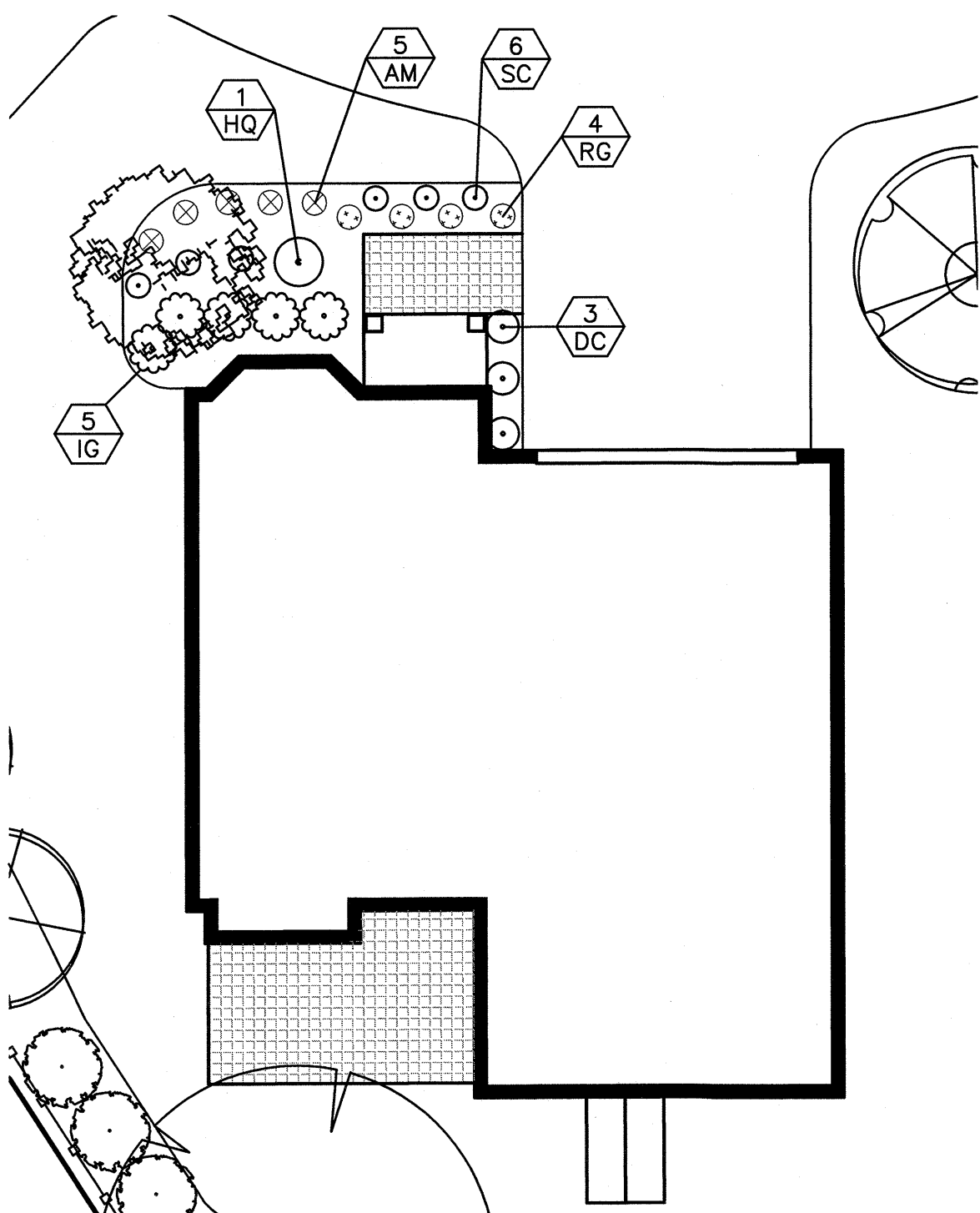




1 PLANT QUANTITY  
XX PLANT DESIGNATION

**TYPICAL QUADRUPLER PLANTING DETAIL**

SCALE: 1"=10'

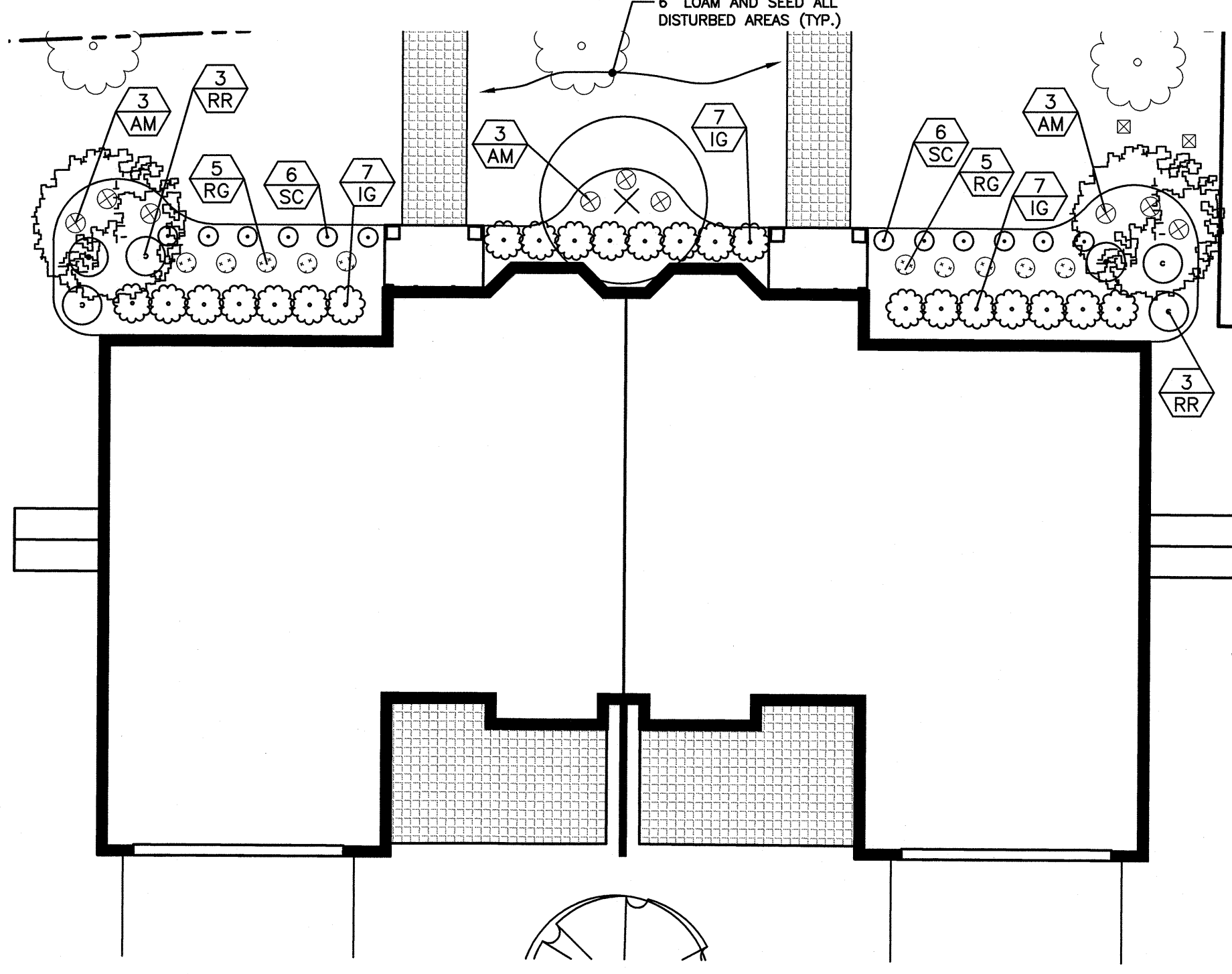


SINGLE UNIT PLANTING SCHEDULE					
PLANT	QNTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHRUBS					
IG	5	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	#7 CONTAINER	MIN. SIZE 30" HT.
HQ	1	HYDRANGEA QUERCIFOLIA 'PEE WEE'	OAK-LEAF HYDRANGEA	#7 CONTAINER	MIN. SIZE 30" HT.
PERENNIALS & GRASSES					
AM	5	ALCHEMILLA MOLLIS	LADY'S MANTLE	#1 CONTAINER	12"-24" SPACING
SC	6	SALVIA NEMOROSA 'CARDONNA'	BLUE SAGE	#1 CONTAINER	12"-24" SPACING
RG	4	RUDEBECKIA 'GOLDSTURM'	GOLDSTURM BLACK-EYED SUSAN	#1 CONTAINER	12"-24" SPACING
DC	3	DESCHAMPSIA CESPITOSA 'GOLD TAU'	TUFTED HAIR GRASS	#2 CONTAINER	12"-24" SPACING

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XX

### SINGLE UNIT DETAIL

SCALE: 1"=10'

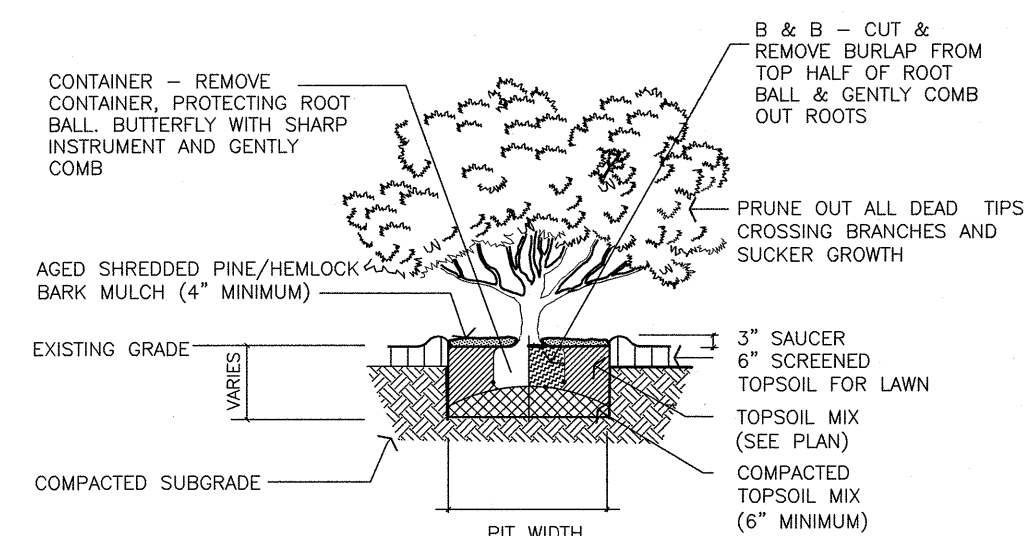


DUPLEX PLANTING SCHEDULE					
PLANT	QNTY	SALVANA NAME	COMMON NAME	SIZE	REMARKS
<b>SHRUBS</b>					
IO	21	ILEX GLABRA "SHAMROCK"	SHAMROCK INKBERY	#7 CONTAINER	MIN. SIZE 30" HT.
RR	6	RHOODODENDRON x 'RAMAPO'	RAMAPO RHOODODENDRON	#7 CONTAINER	MIN. SIZE 30" HT.
<b>PERENNIALS &amp; GRASSES</b>					
AM	9	ALCHEMILLA MOLLIS	LADY'S MANTLE	#1 CONTAINER	12"-24" SPACING
SC	12	SALVA NEMOROSA "CARDONNA"	SALVA	#1 CONTAINER	12"-24" SPACING
RG	10	RUBRICKA "GOLDSTURM"	GOLDSTURM BLACK-EYED SUSAN	#1 CONTAINER	12"-24" SPACING

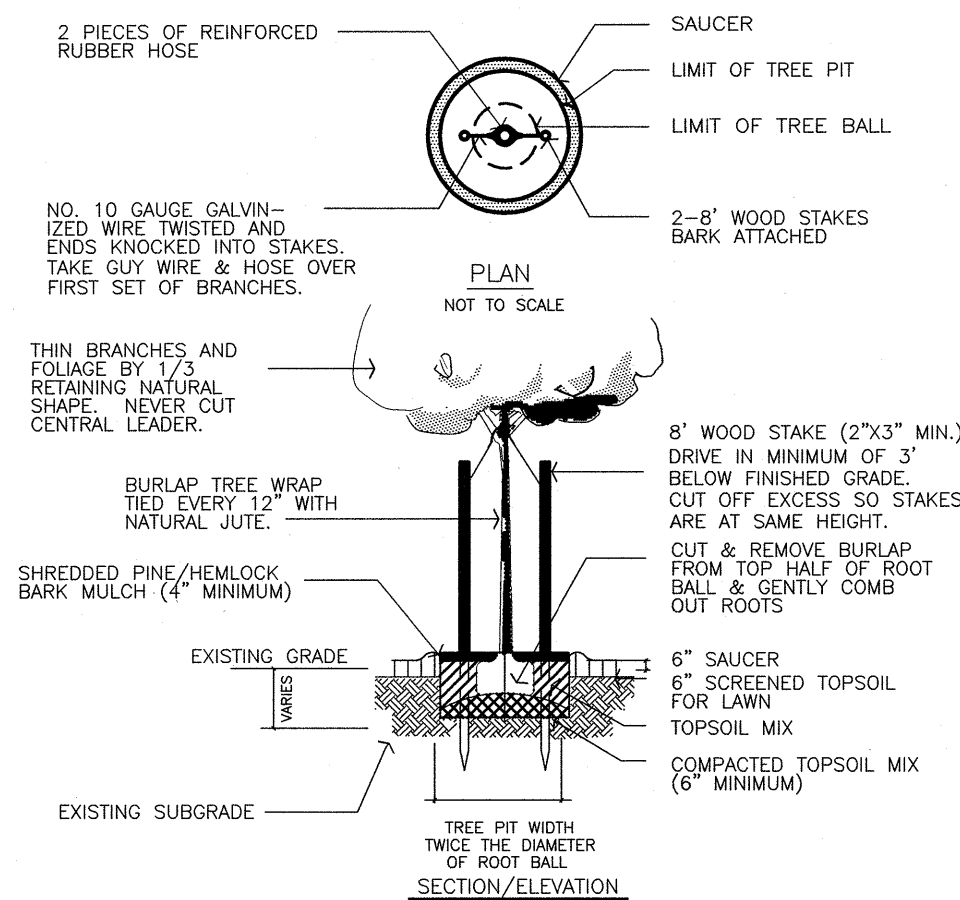
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### DUPLEX PLANTING DETAIL

SCALE: 1"=10'

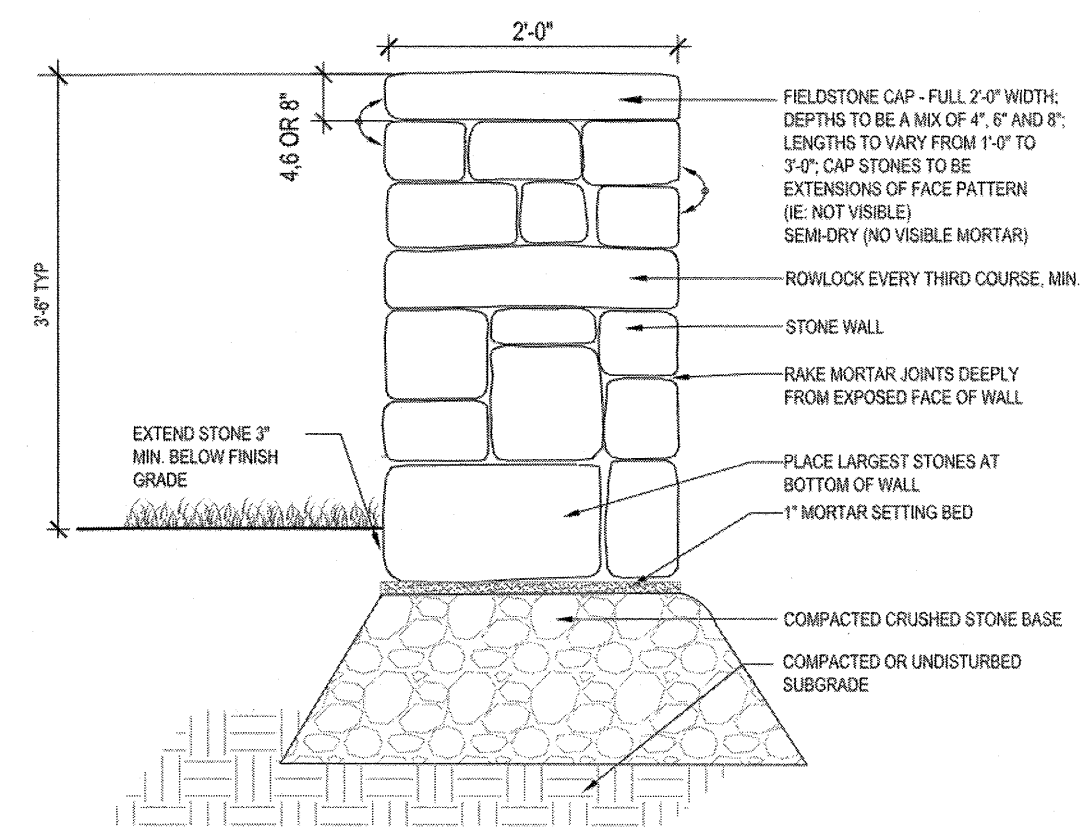
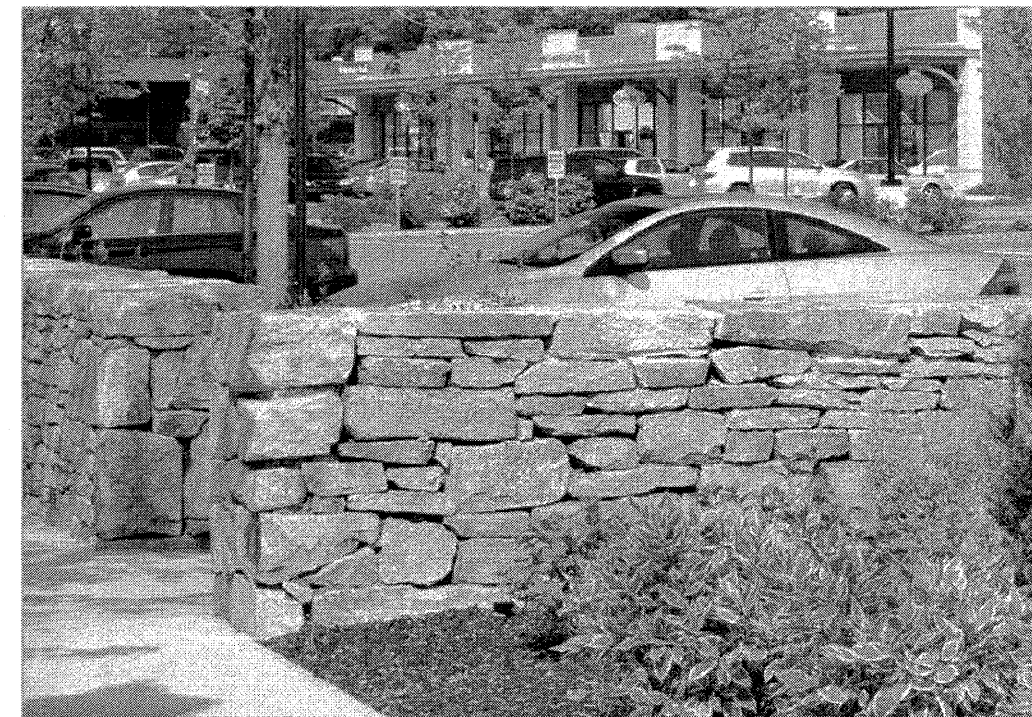


**TYPICAL SHRUB PLANTING**  
NOT TO SCALE



### TYPICAL TREE PLANTING

NOT TO SCALE



STONE WALL  
NOT TO SCALE

## LANDSCAPE DETAILS

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

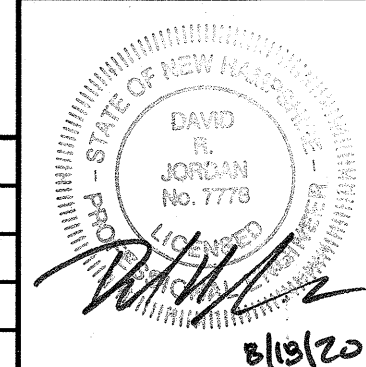
# GPI

Engineering  
Design  
Planning  
Construction Management

Engineering	Greenman-Pedersen, Inc.
Design	44 Stiles Road
Planning	Suite One
Construction Management	

SCALE: 1" = 30'

DATE: AUGUST 18, 2020



PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810—PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

ZONE: COMMERCIAL-INDUSTRIAL 'C' & RESIDENTIAL

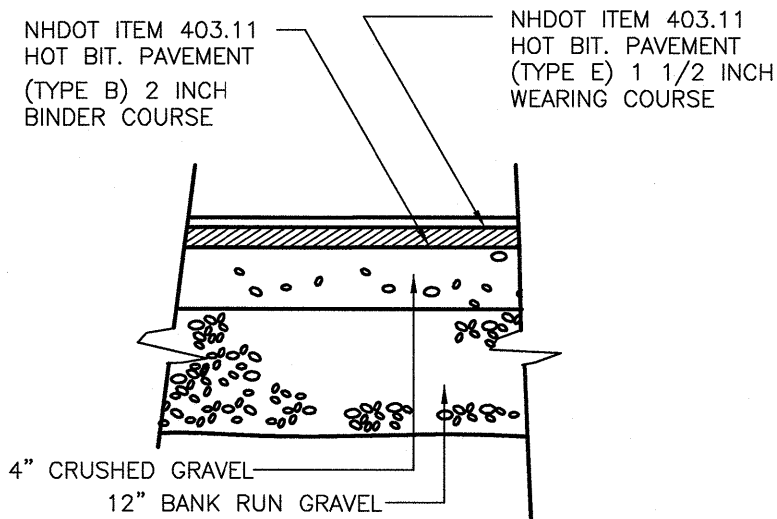
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	4214SP-PH3	421417	9 OF 13



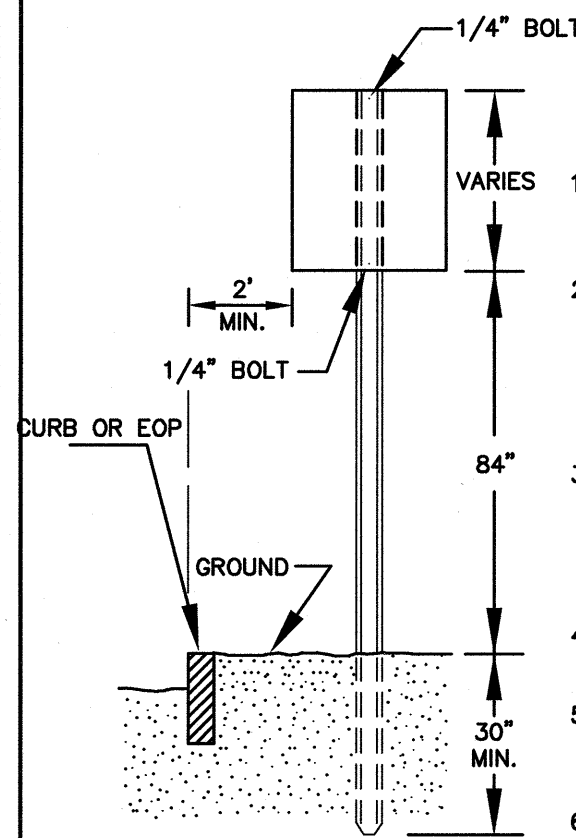
The diagrams illustrate the required area of bearing face for different types of pipe connections:

- TEE:** Shows a tee connection where a vertical pipe meets a horizontal pipe. The area of bearing face is indicated by a shaded region and labeled "AREA OF BEARING FACE".
- PLUG:** Shows a plug connection where a pipe is terminated. The area of bearing face is indicated by a shaded region and labeled "AREA OF BEARING FACE". A dimension of "1'-0" MIN." is shown for the length of the plug.
- BEND:** Shows a bend connection where a pipe changes direction. The area of bearing face is indicated by a shaded region and labeled "AREA OF BEARING FACE". The diagram also shows "CONCRETE BACKING AGAINST UNDISTURBED MATERIAL" and "UNDISTURBED MATERIAL".

**NOT TO SCALE**

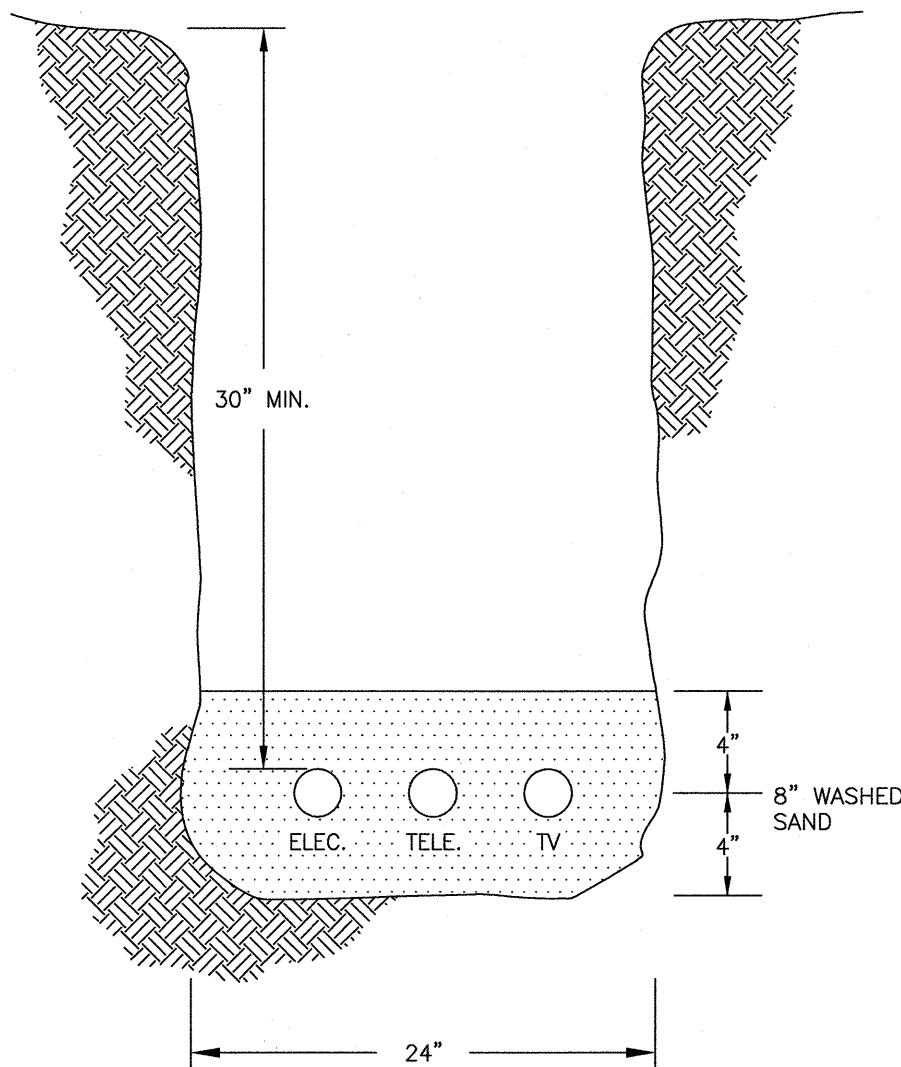


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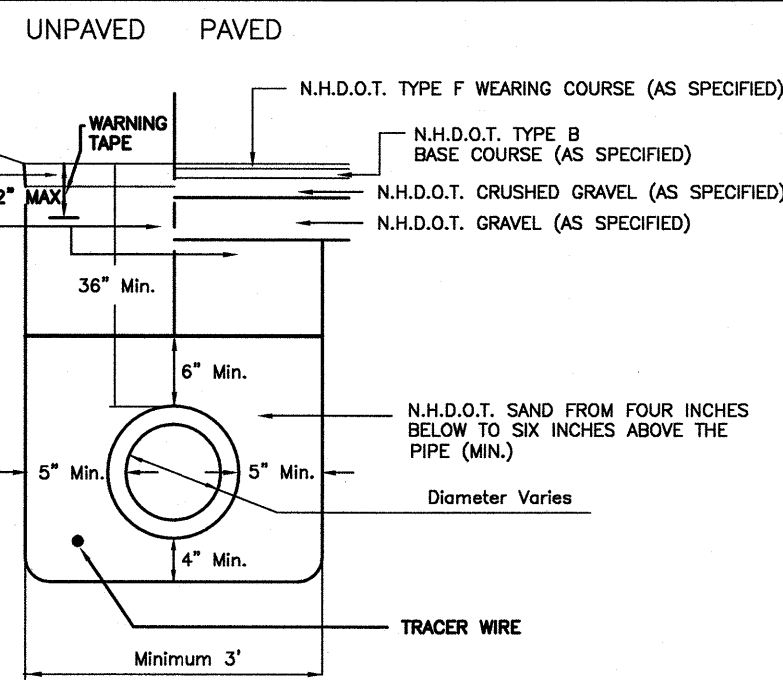


- ## NOTES
1. POSTS SHALL BE PLUMB; ANY POST BENT OR OTHERWISE DAMAGED SHALL BE REMOVED AND PROPERLY REPLACED. POSTS MAY BE SET OR DRIVEN.
  2. WHEN POSTS ARE SET, HOLES SHALL BE DUG TO THE PROPER DEPTH. AFTER INSERTING A POST, THE HOLES SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN CARE BEING TAKEN TO PRESERVE THE ALIGNMENT OF THE POST.
  3. WHEN POSTS ARE DRIVEN, A SUITABLE DRIVING CAP SHALL BE USED AND AFTER DRIVING THE TOP OF THE POST SHALL HAVE SUBSTANTIALLY THE SAME CROSS-SECTIONAL DIMENSION AS THE BODY OF THE POST; BATTERED HEADS WILL NOT BE ACCEPTED.
  4. POSTS SHALL NOT BE DRIVEN WITH THE SIGN ATTACHED TO THE POST.
  5. SIGNS SHALL BE ERECTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
  6. WHEN SIGN IS IN PLACE NO PART OF POST SHALL EXTEND ABOVE THE SIGN.

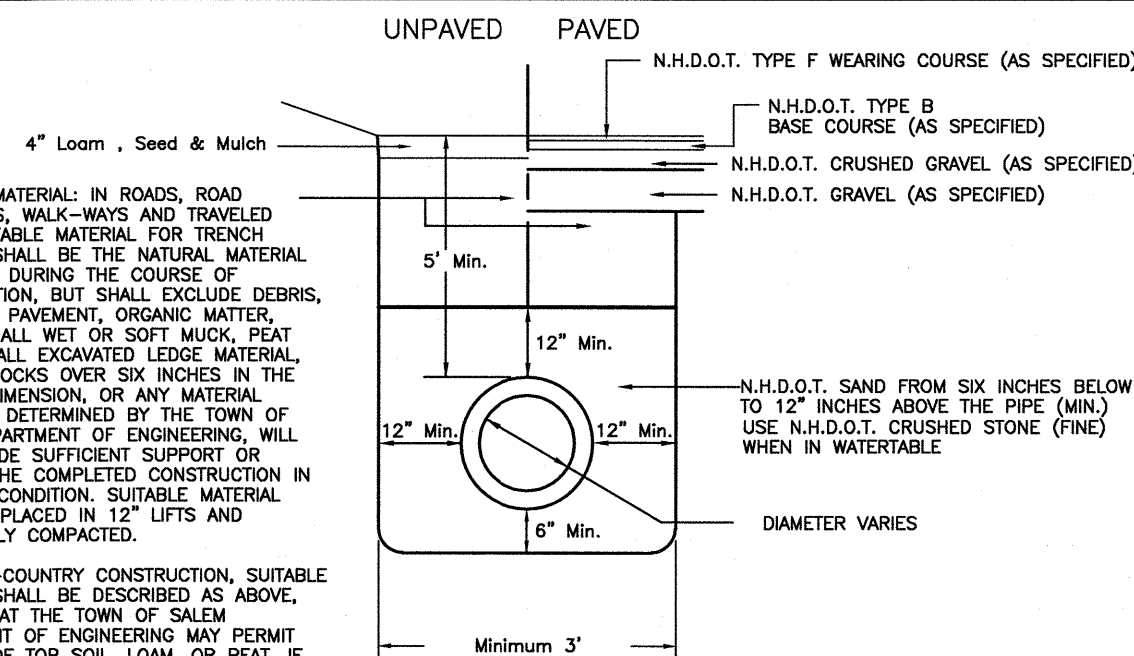
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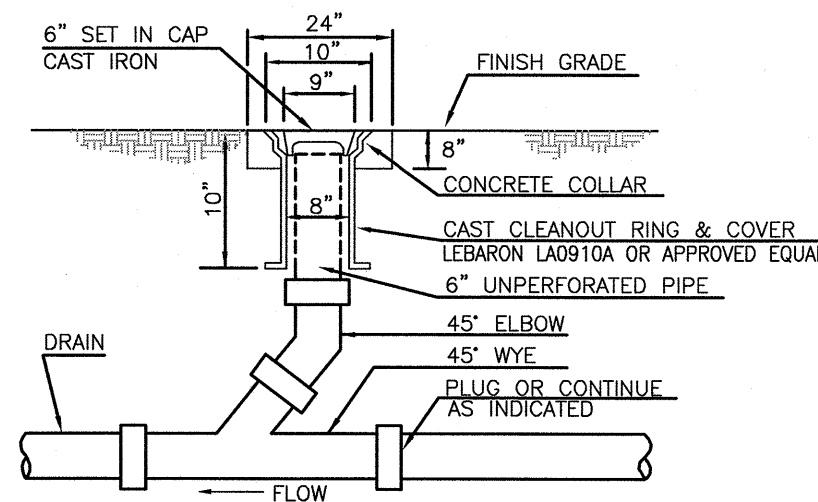
**NOT TO SCALE**



NOT TO SCALE



NOT TO SCALE



NOT TO SCALE

NO.	DESCRIPTION	BY	DATE

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

Engineering  
Design  
Planning  
Construction Management  
**GPINET.COM**

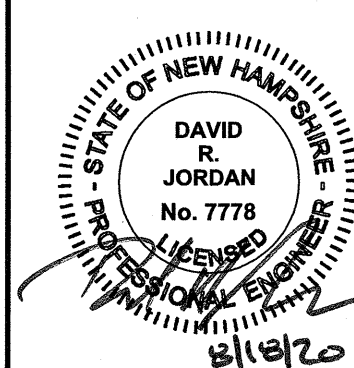
Engineering  
Design  
Planning  
Construction Management

**GPINET.COM**

Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079

SCALE: N.T.S.

DATE: AUGUST 18, 2020

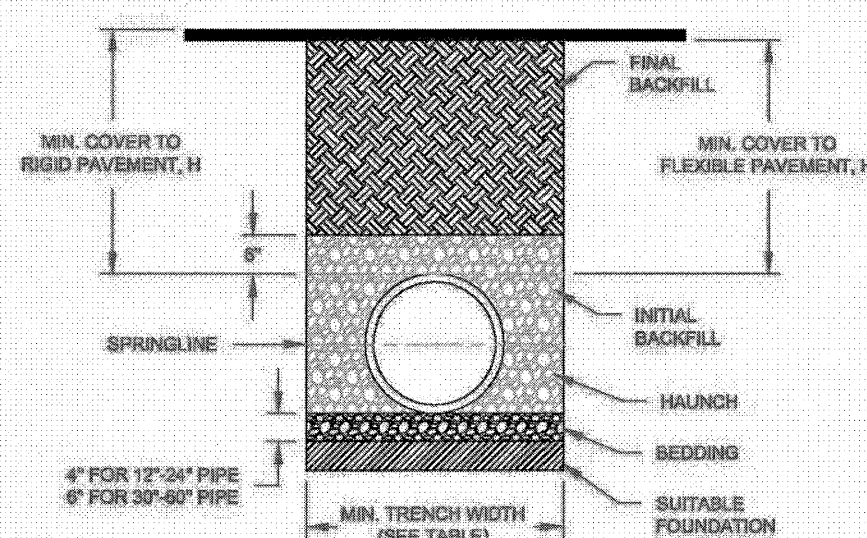


PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810-PAGE 1414

SALEM PLANNING BOARD  
APPROVAL

ZONE: COMMERCIAL—INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CPS/DRJ	4214DET-PH3	421417	10 OF 13



- NOTES:**
- (SEE TABLE)
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDED EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. **FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A FIRM BED OF NATURAL MATERIAL OR REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTECHNICAL MATERIAL.
4. **BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM COVER THICKNESS SHALL BE 4" (100mm) FOR 4" OR 4" IN (100mm-600mm), 6" (150mm) FOR 36" (900mm-900mm).
5. **INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 8" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. **MINIMUM COVER:** MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) SHALL BE 12" (300mm) FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" (600mm) FOR 48" (1200mm) DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	46"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"


\* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

PIPE DIAM.	COOPER E-80 <sup>TM</sup>
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

\*\*\* COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.  
\*\*\* E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

2	ADDED E-93 INFORMATION	TSR	082097	
REV.	DESCRIPTION	BY	NMED/YF	CHKD

TYPICAL TRENCH DETAIL.		4540 TRUMAN BLVD HILLIARD, OHIO 43026 ADVANCED DRAINAGE SYSTEMS, INC.	DATE	CNS
			DATE	10/18/08
DRAWING NUMBER: STD-101			DATE	NTS
			DATE	1 OF 1

NOT TO SCALE



# NOTES

1. MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE 4 INCHES.
2. PIPE AND JOINT MATERIALS

1. FITTINGS AND JOINTS SHALL BE EXTRA STRENGTH CLAY PIPE CONFORMING TO THE REQUIREMENTS OF ASTM C-700.
2. JOINTS SHALL BE MADE WITH OIL RESISTANT GASKETS. IN ACCORDANCE WITH ASTM C-425 TYPE II MANUFACTURERS' INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED.

1. CAST IRON PIPE AND FITTINGS SHALL CONFORM TO ASTM SPECIFICATIONS C544 TYPE II.
2. JOINTS SHALL BE OF THE SLUVE-COUPING TYPE CONFORMING TO ASTM SPECIFICATIONS C544 TYPE II. TYPE OR ELASTOMERIC MATERIAL AND SHALL CONFORM TO ASTM SPECIFICATION D1888. MANUFACTURERS' INSTRUCTIONS SHALL BE FOLLOWED FOR INSTALLATIONS.

1. CAST IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE:
  - A21.1 THICKNESS DESIGN OF CAST IRON PIPE
  - A21.4 CEMENT MORTAR LINING FOR CAST IRON PIPE AND FITTINGS
  - A21.6 CAST IRON PIPE CENTRIFUGALLY CAST IN SAND LINED Molds FOR WATER OR OTHER LIQUIDS
  - A21.8 CAST IRON PIPE CENTRIFUGALLY CAST IN SAND LINED Molds FOR WATER OR OTHER LIQUIDS
  - A21.10 CAST IRON FITTINGS, 2 INCHES THROUGH 48 INCHES FOR WATER AND OTHER LIQUIDS
2. JOINTS SHALL BE OF THE MECHANICAL OR PUSH ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO:
  - A21.11 RUBBER GASKET JOINTS FOR CAST IRON PRESSURE PIPE AND FITTINGS

1. DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:
  - A21.50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A305 DUCTILE IRON CASTINGS
  - A21.51 DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL Molds OR SAND LINED Molds FOR WATER OR OTHER LIQUIDS
2. JOINTS SHALL BE AS SPECIFIED IN CIP ABOVE, CAST IRON PIPE JOINTS.

1. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
2. JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER-TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERENT MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER "Y" OR AT THE FOUNDATION WALL, APPROPRIATE ADAPTERS SHALL BE USED.

1. "T" AND "Y" WHERE A "T" OR "Y" IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE ADAPTER SHALL BE USED. THE SEWER, FOLLOWING MANUFACTURERS' INSTRUCTIONS USING A BOLTED, DRILLED OR SAWN OPENING. THE PRACTICE OF BREAKING AN OPENING IN THE EXISTING SEWER SHALL BE PROHIBITED. THE PRACTICE OF BREAKING AN OPENING IN THE EXISTING SEWER SHALL BE PROHIBITED. THE PRACTICE OF BREAKING AN OPENING IN THE EXISTING SEWER SHALL BE PROHIBITED. THE PRACTICE OF BREAKING AN OPENING IN THE EXISTING SEWER SHALL BE PROHIBITED.

1. PIPE INSTALLATION THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL, AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

1. TESTING THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING):
  - A. AN OBSERVATION "T" SHALL BE INSTALLED AS SHOWN. WHEN READY TO TEST, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE "T". AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
  - B. THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER TO SIMULATE, AS NEARLY AS POSSIBLE, NET TRENCH CONDITIONS. IF THE TRENCH IS NOT, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.

1. DOES NOT APPLY TO INSTALLATIONS WHERE "T" AND "Y" ARE USED.
1. C. FLUORESCENT DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER. IF THE TRENCH IS WET, GROUND WATER OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST MANHOLE DOWNSTREAM. LEAKAGE OBSERVATION IN ANY OTHER MANHOLE SHALL BE PROHIBITED. LEAKAGE OBSERVATION IN ANY OTHER MANHOLE SHALL BE PROHIBITED. LEAKAGE OBSERVATION IN ANY OTHER MANHOLE SHALL BE PROHIBITED.

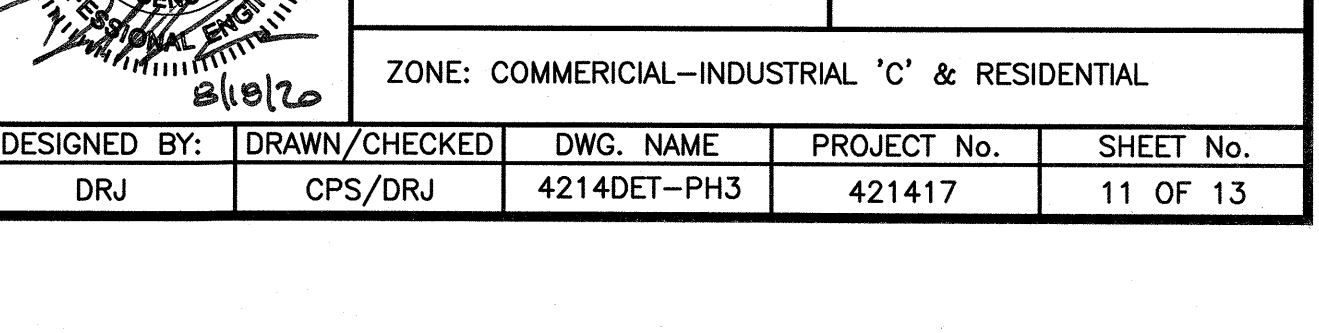
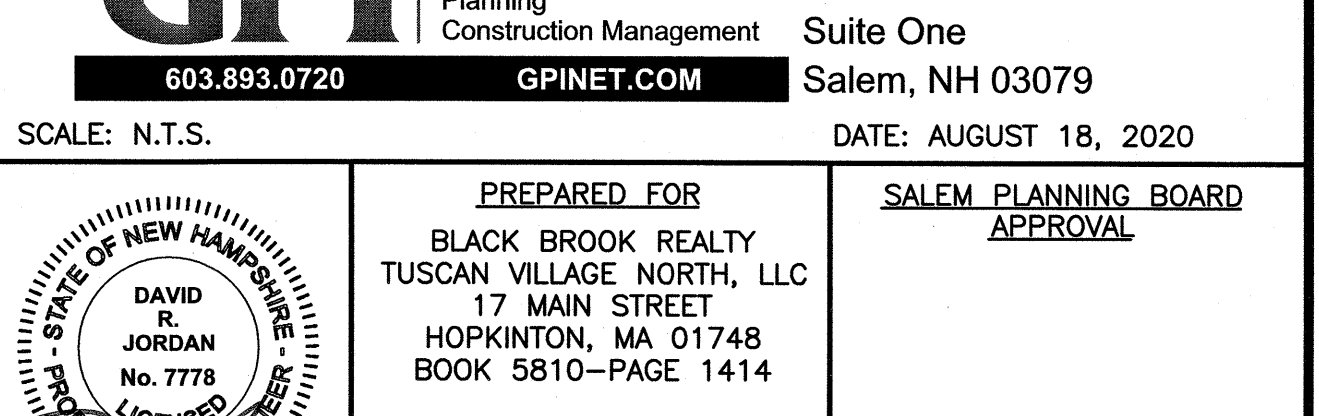
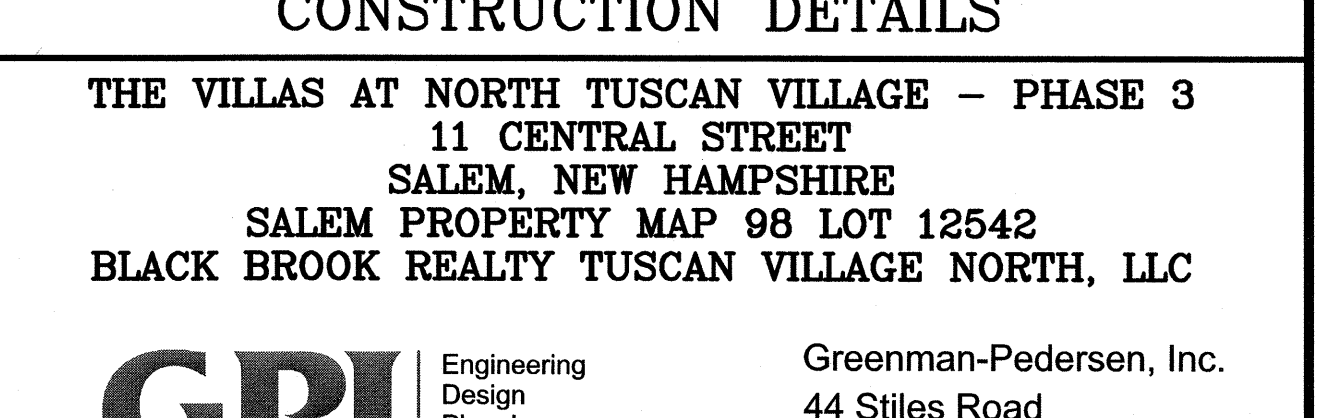
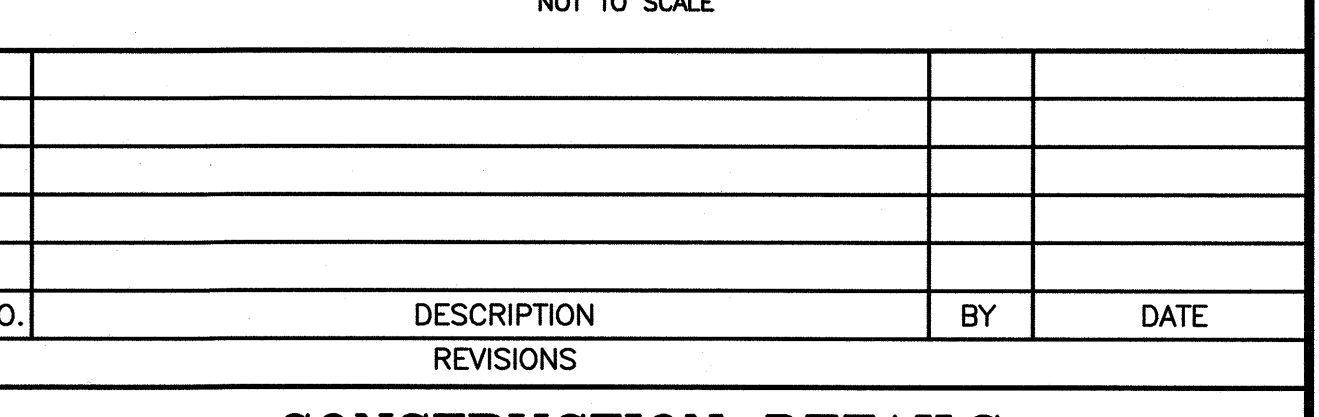
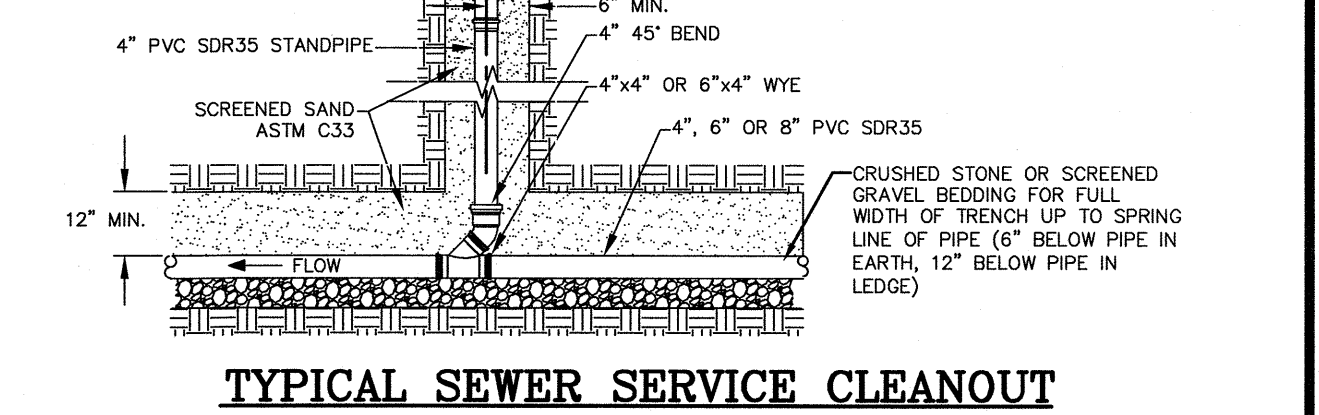
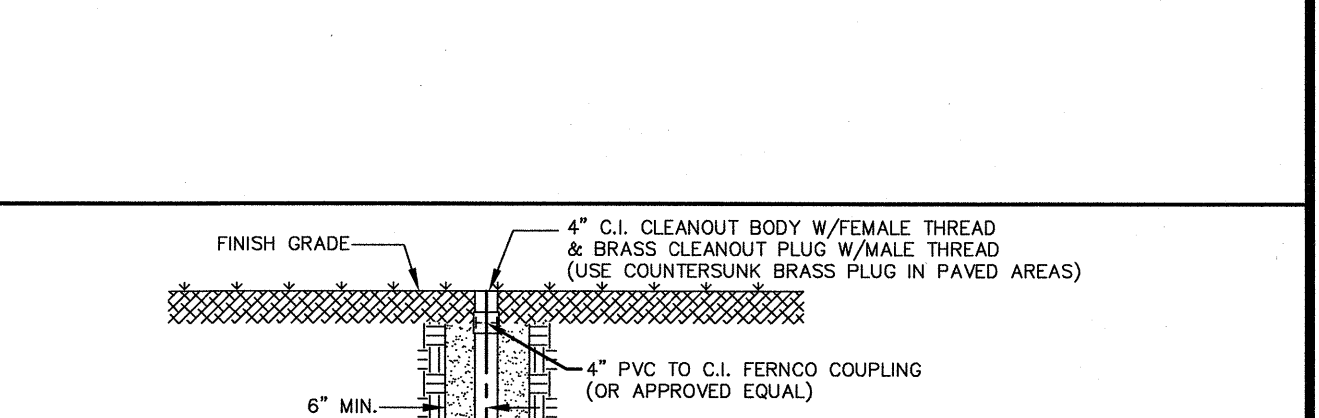
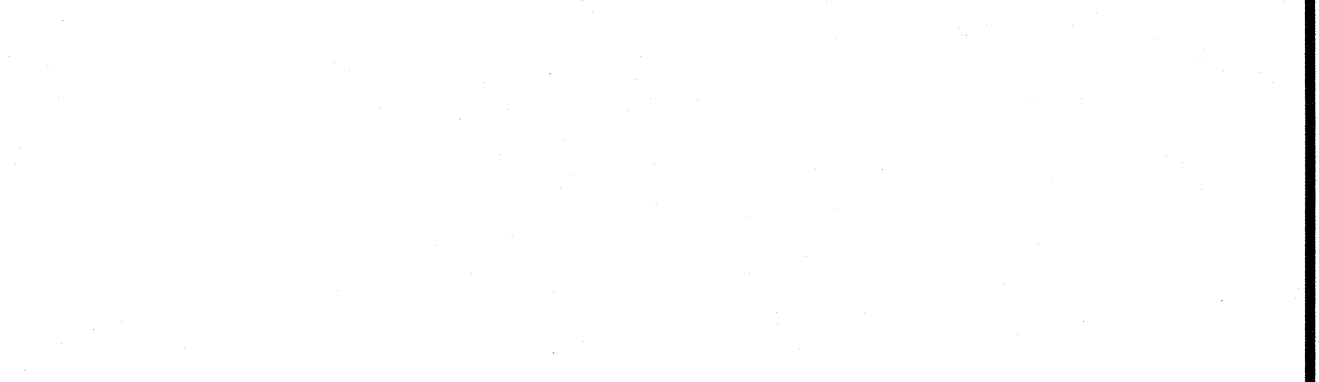
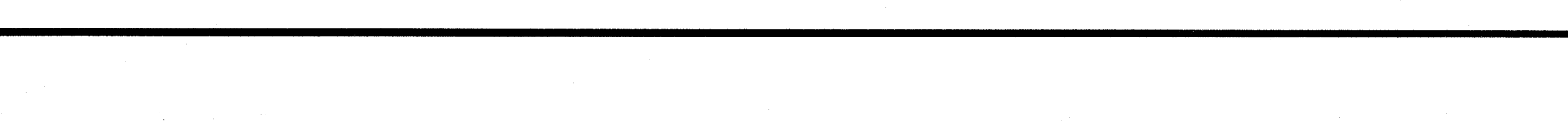
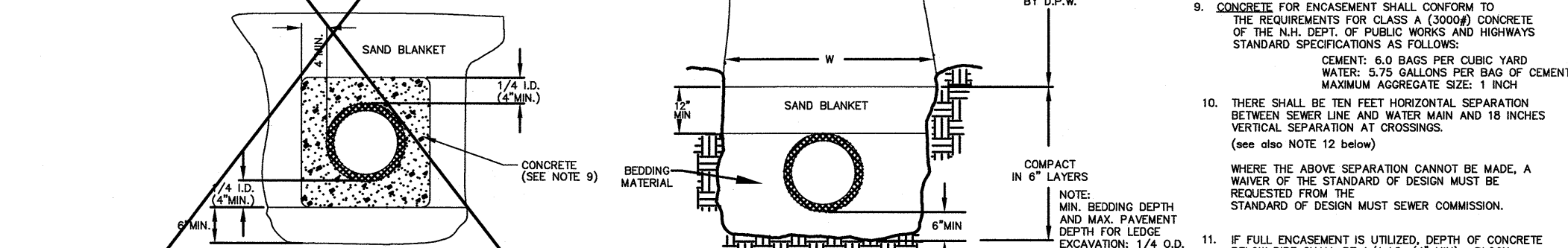
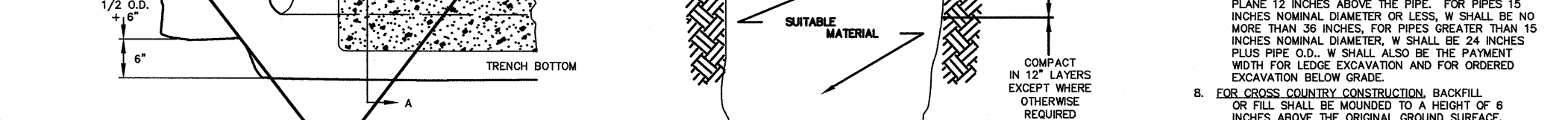
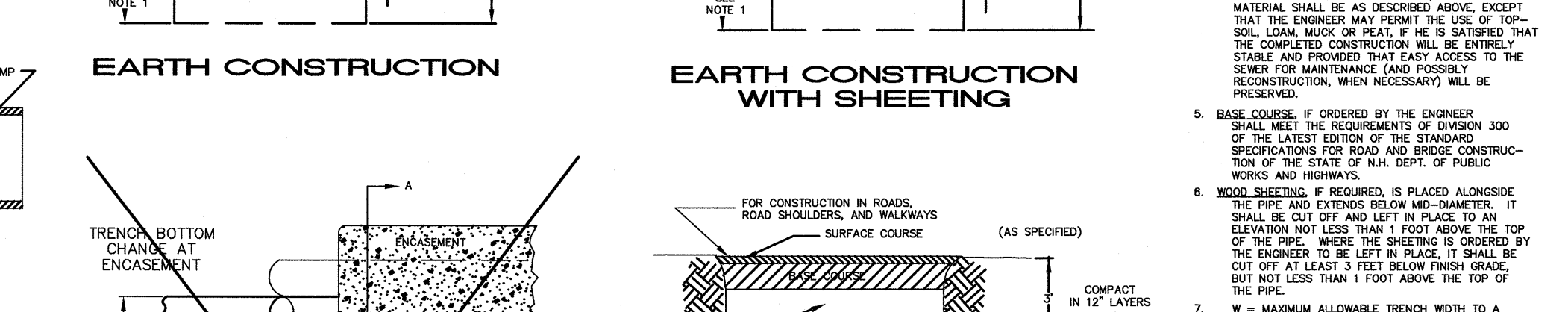
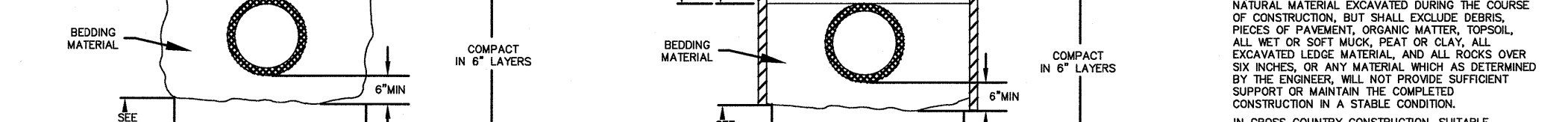
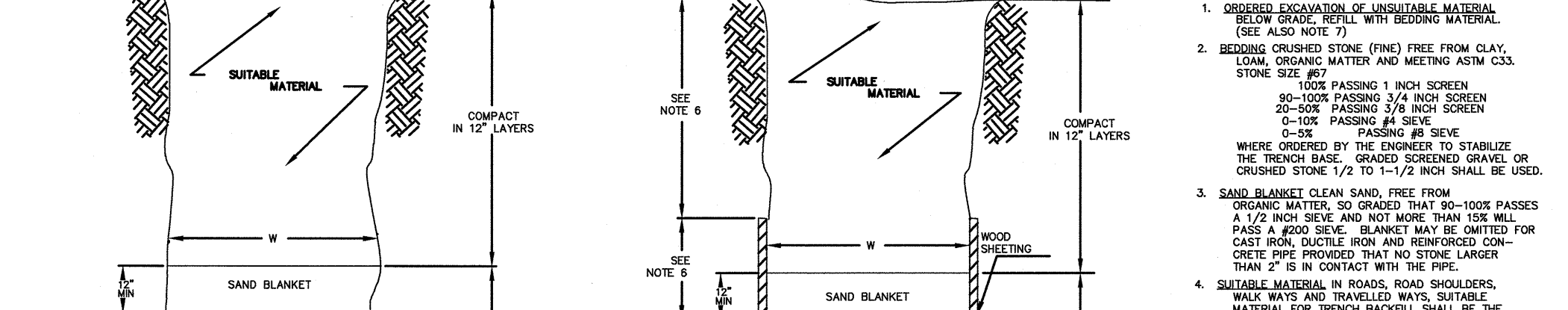
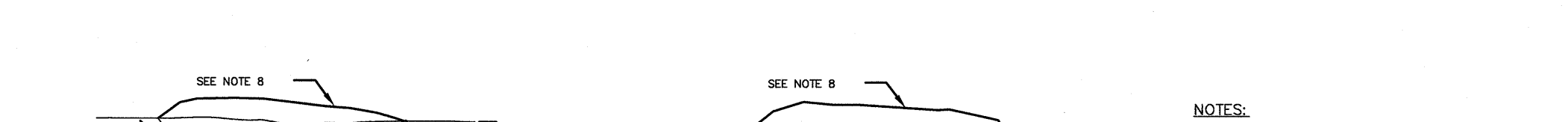
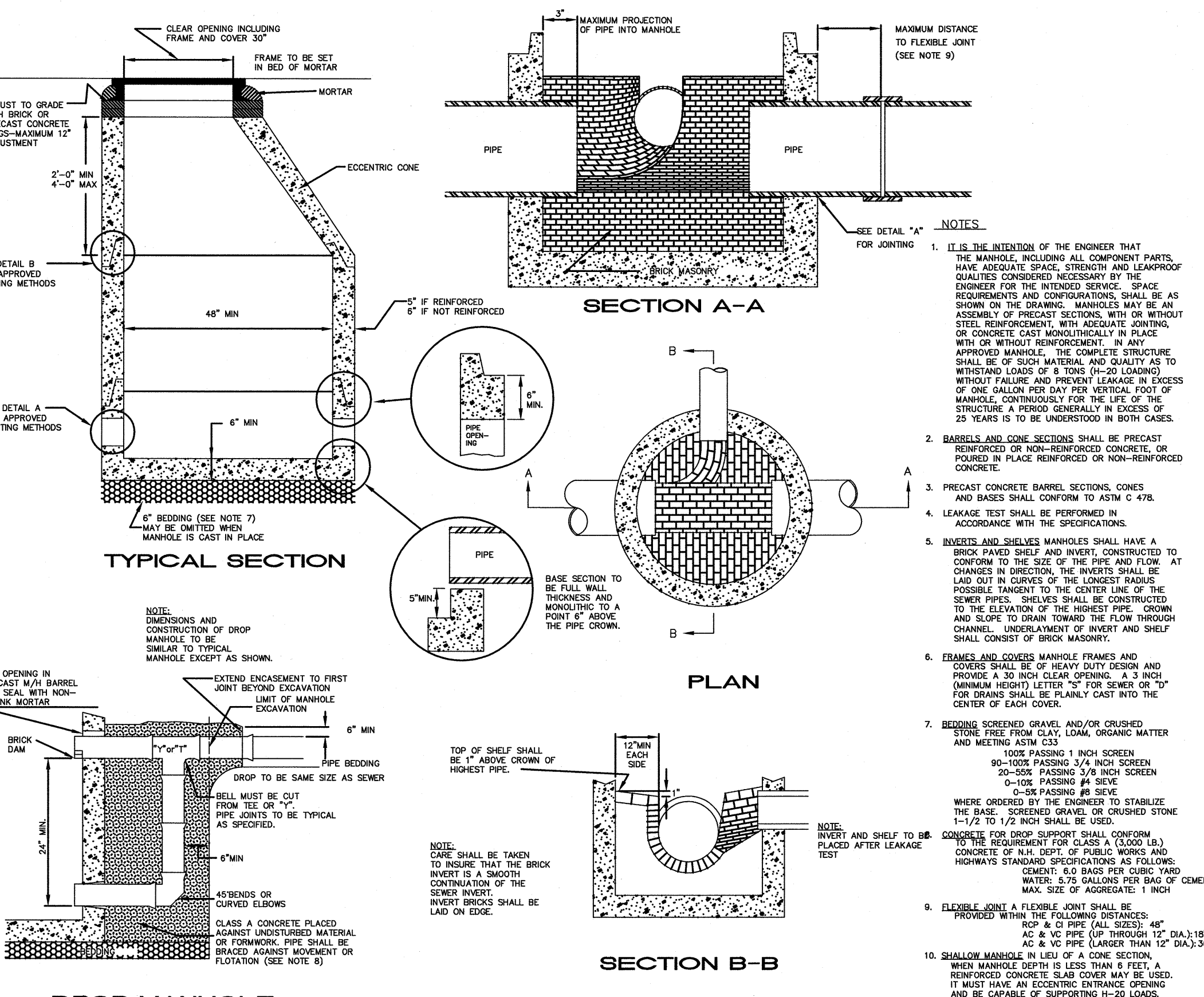
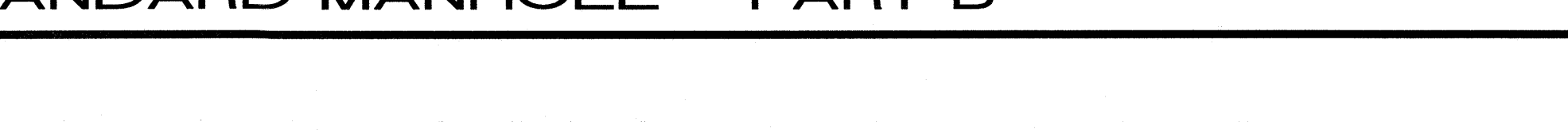
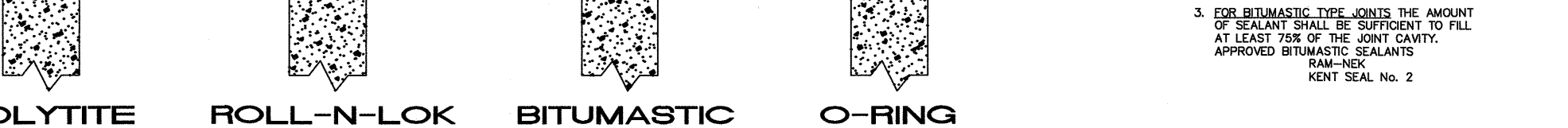
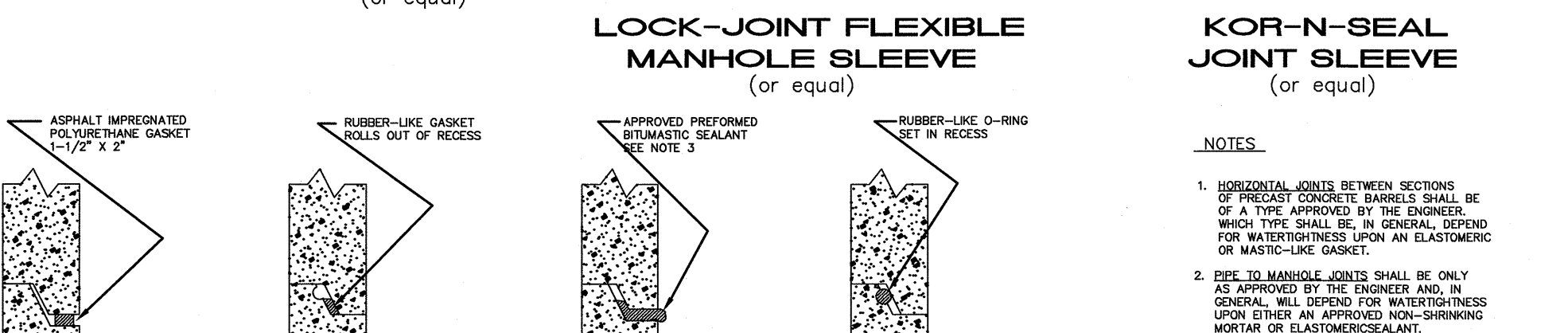
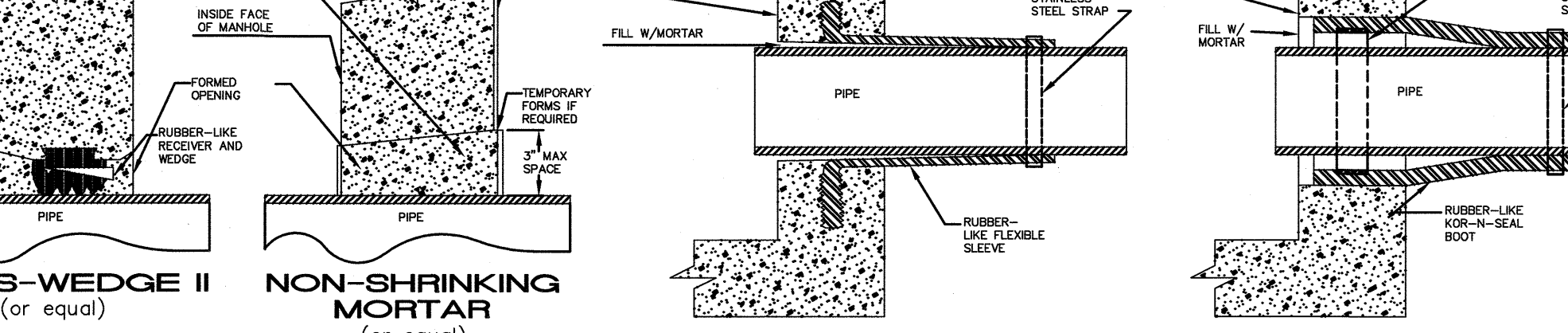
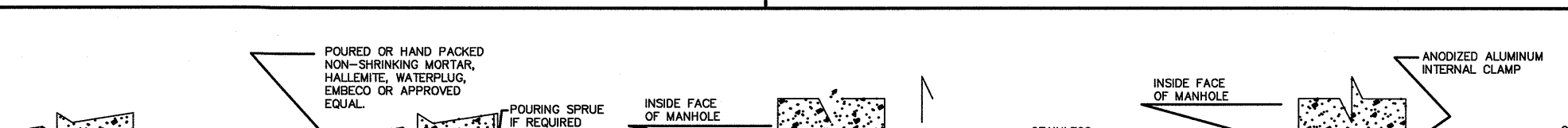
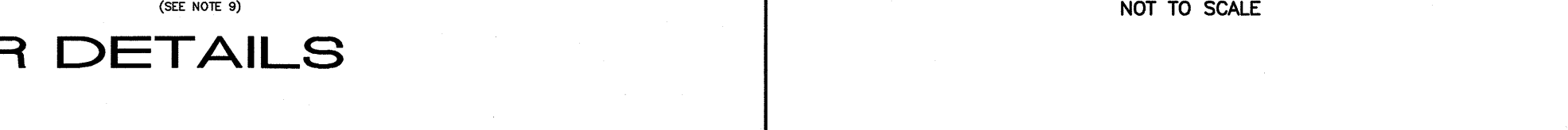
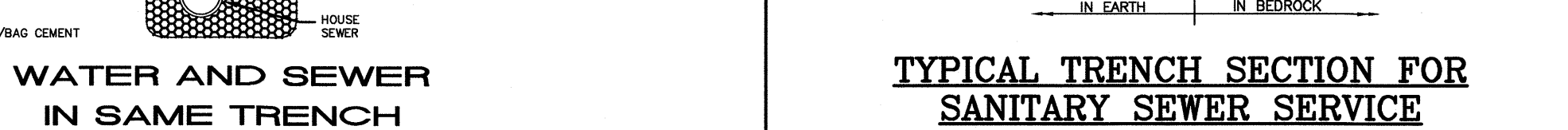
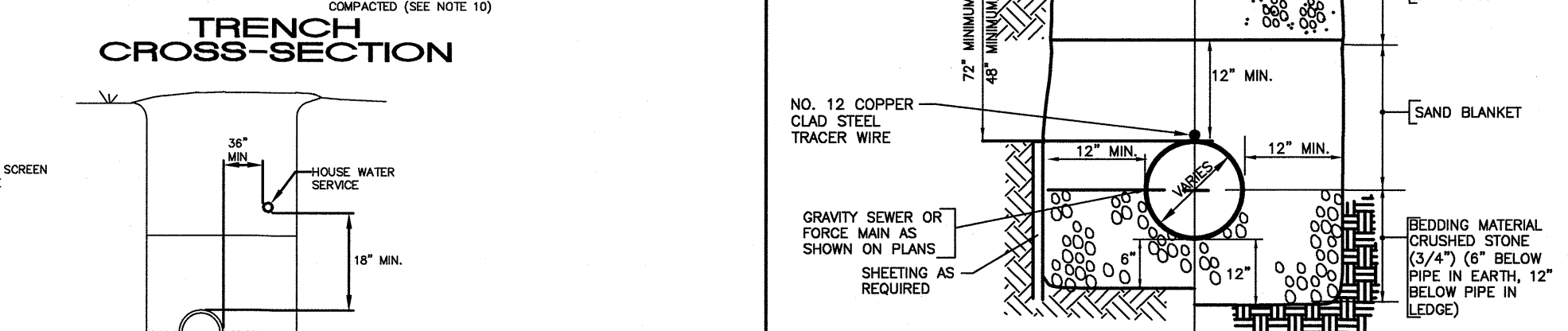
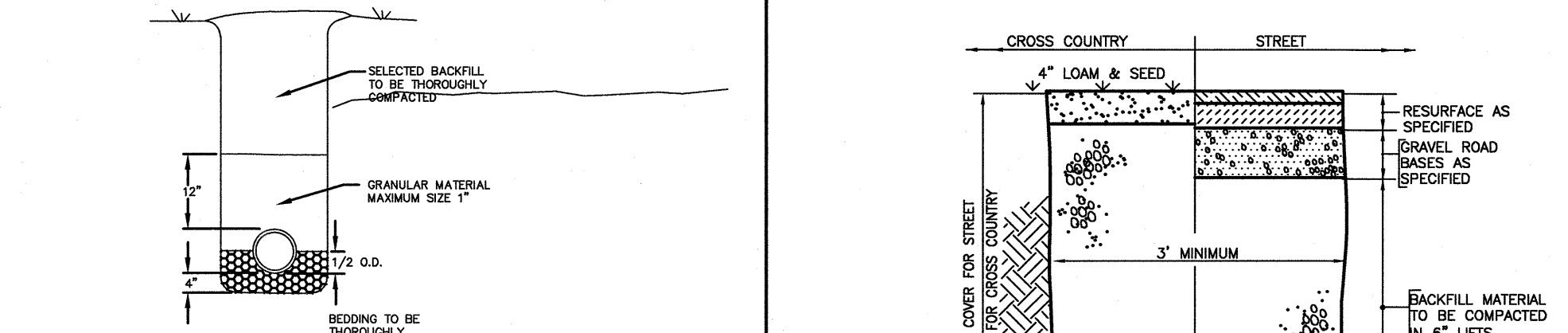
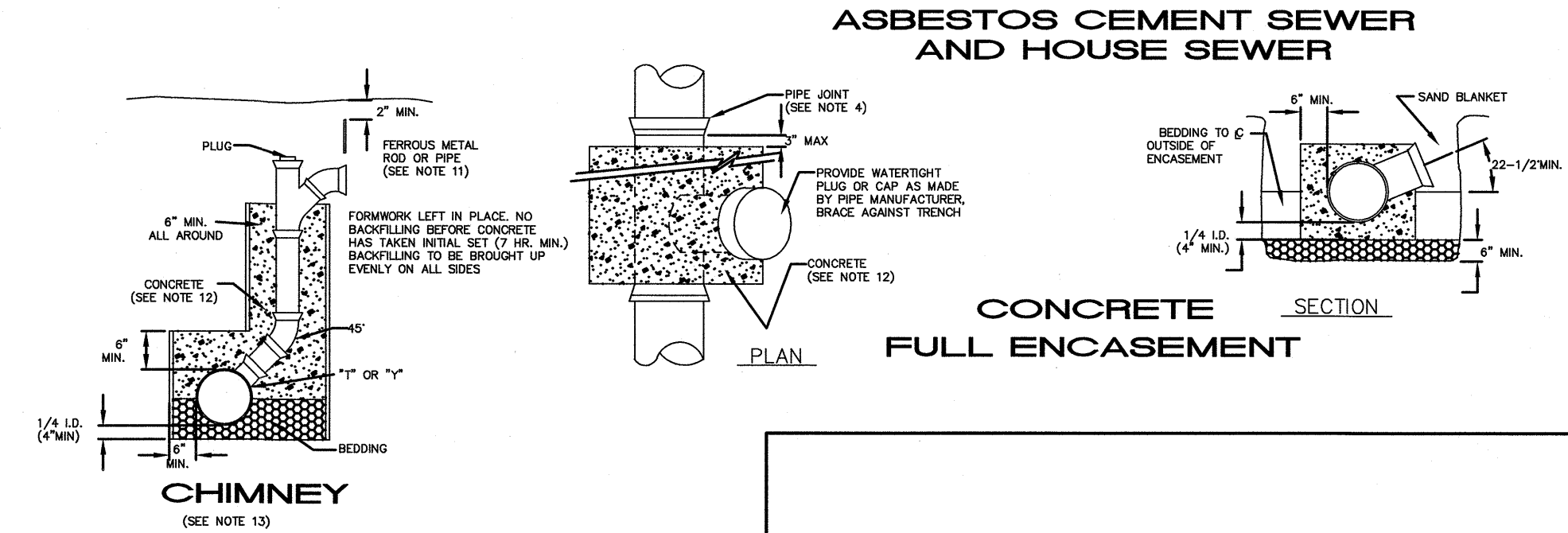
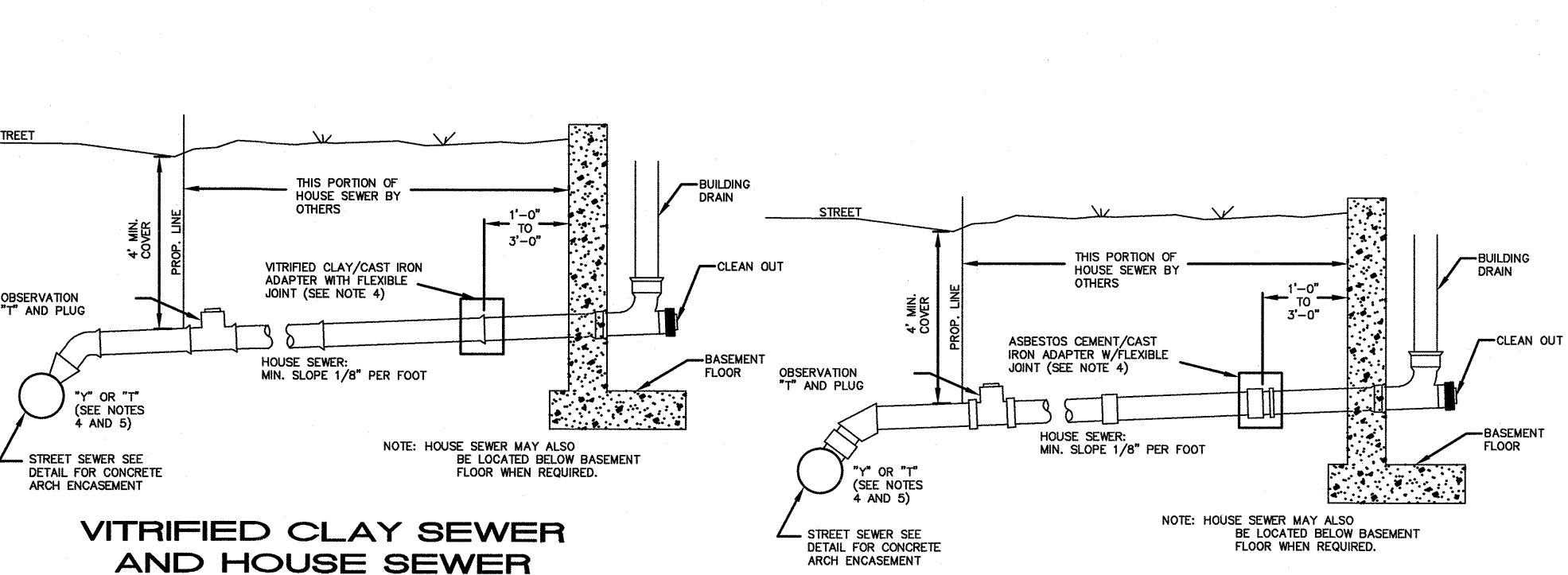
1. ILLEGAL CONNECTION NOTHING BUT SANITARY WASTE FLOW FROM THE HOUSE, TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.
1. HOUSE WATER SERVICE SHOULD NOT BE LAID IN THE SAME TRENCH AS THE SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO ONE SIDE OF THE HOUSE SEWER AS SHOWN.

1. BEDDING, SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33-47:
  - 100%-PASSING 1 INCH SCREEN
  - 90-100%-PASSING 3/4 INCH SCREEN
  - 80-100%-PASSING 3/8 INCH SCREEN
  - 0-100%-PASSING #4 SIEVE
  - 0-5%-PASSING #6 SIEVE

1. LOCATION THE LOCATION OF THE "T" OR "Y" SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERRUS METAL ROD OR PIPE SHALL BE PLACED OVER THE "T" OR "Y", AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A 3" PIPE OR PROBE.

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:
  - FOR CLASS A (3000 LB.) CONCRETE OF THE 1 INCH DEPTH OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS: CEMENT: 5.75 BAGS PER BAG OF CEMENT
  - AGGREGATE: 1 1/2 INCH MAX. GRAVEL

1. CHIMNEYS IF VERTICAL DROP INTO THE SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION.





StormTech Chambers  
For Residential Downspout  
Drainage Systems.



Solve Your Puddle Problems Today!

Keep your yard free from puddles and ponding during heavy rain storms with StormTech chambers. The chambers can store water from roofs or other problem areas underground, eliminating water logging or slippery frozen water conditions. Constructed of polypropylene plastic, StormTech chambers are light weight and inherently resistant to environmental stress cracking and chemicals typically found in stormwater runoff.

The StormTech Downspout Drainage System.

StormTech offers two chamber sizes to manage water from downspouts or ponded areas. Residential gutters gather rainwater and deliver it to the chambers via the downspout or other inlet pipe. To prevent soil erosion, either a small amount of stone or filter fabric along the bottom of the trench is needed.

StormTech Drainage Benefits.

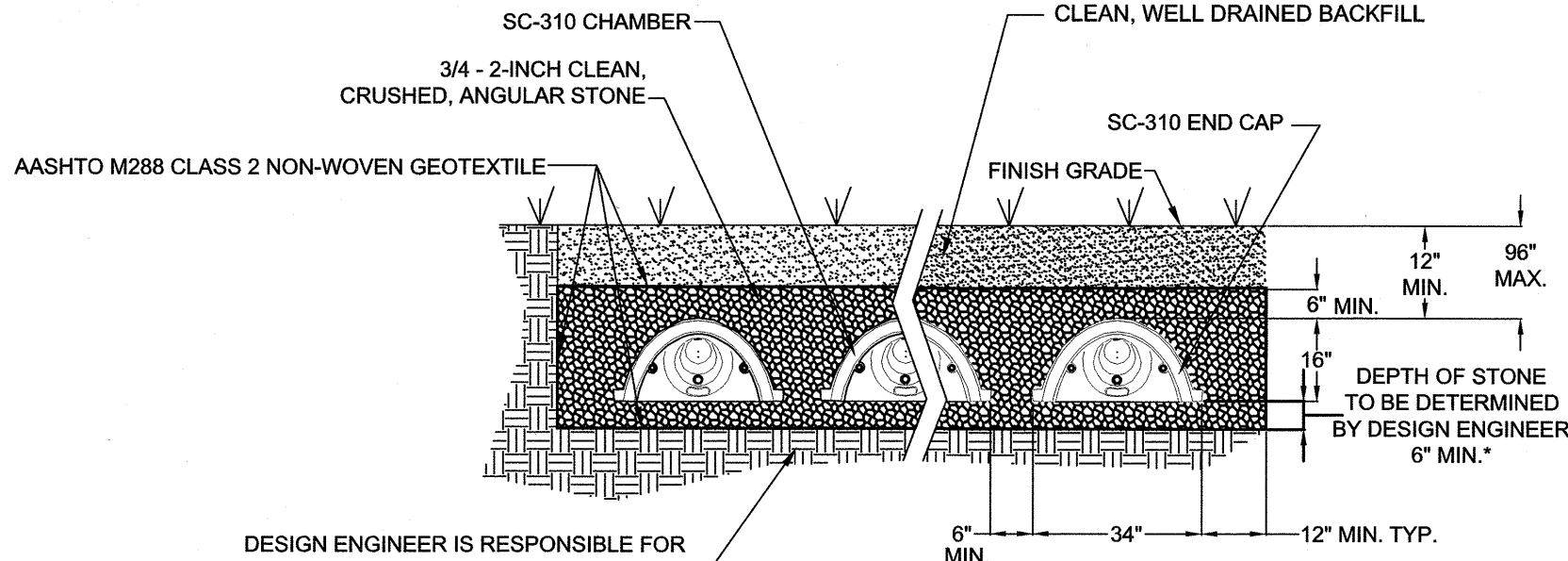
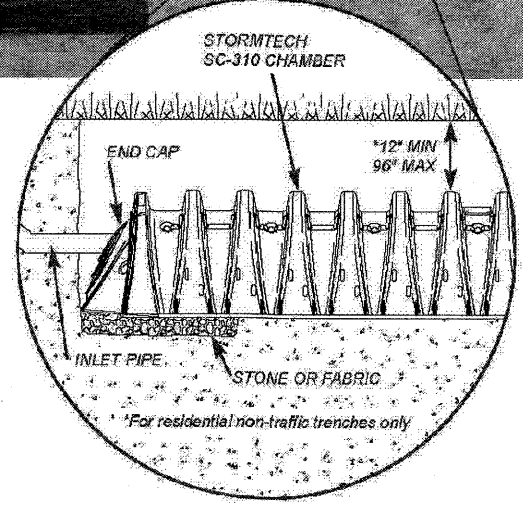
**Installation.** StormTech chambers can easily be hand carried into position and installed without the use of heavy construction equipment. StormTech chambers require an excavated area, piping material and filter fabric.

**Aesthetics.** Runoff can be diverted away and stored safely and neatly underground. No more ponding water, frozen walkways or soil erosion contributing to the negative aesthetics of your yard.

**Environmental.** The chambers help recharge groundwater resources by replicating nature's own process of infiltration.

**Safety.** Because the chambers are underground, they eliminate erosion ditches and potential hazards caused by conventional roof drains and ice build-up in the winter.

**Versatility.** StormTech chambers are ideal for storing water from residential rooftops, driveways, tennis courts or ponded areas in the yard.



DESIGN ENGINEER IS RESPONSIBLE FOR ENSURING THE REQUIRED BEARING CAPACITY OF SUBGRADE SOILS\*

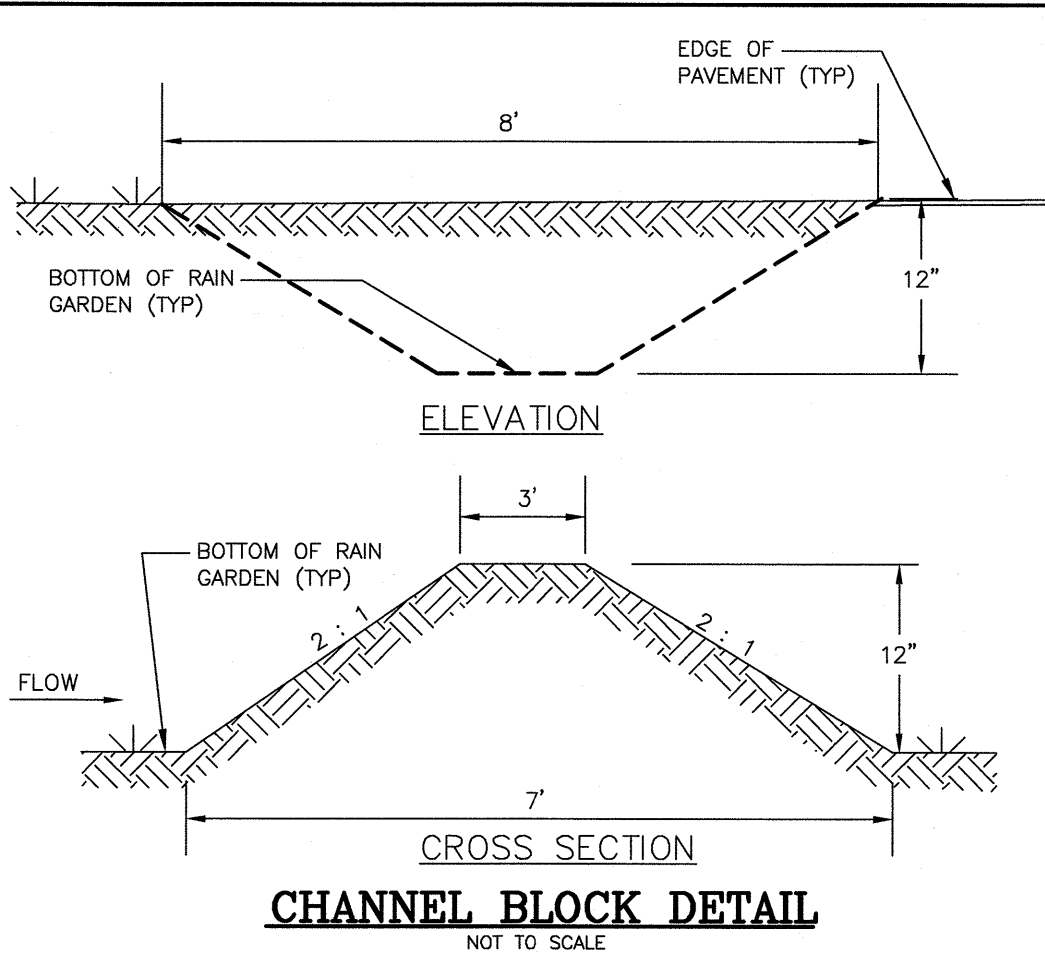
STORMTECH SC-310 CHAMBER SYSTEM  
TYPICAL CROSS SECTION DETAIL  
NOT TO SCALE

FOR STORMTECH INFORMATION  
CALL 1-888-892-2694  
\*SEE STORMTECH DESIGN MANUAL

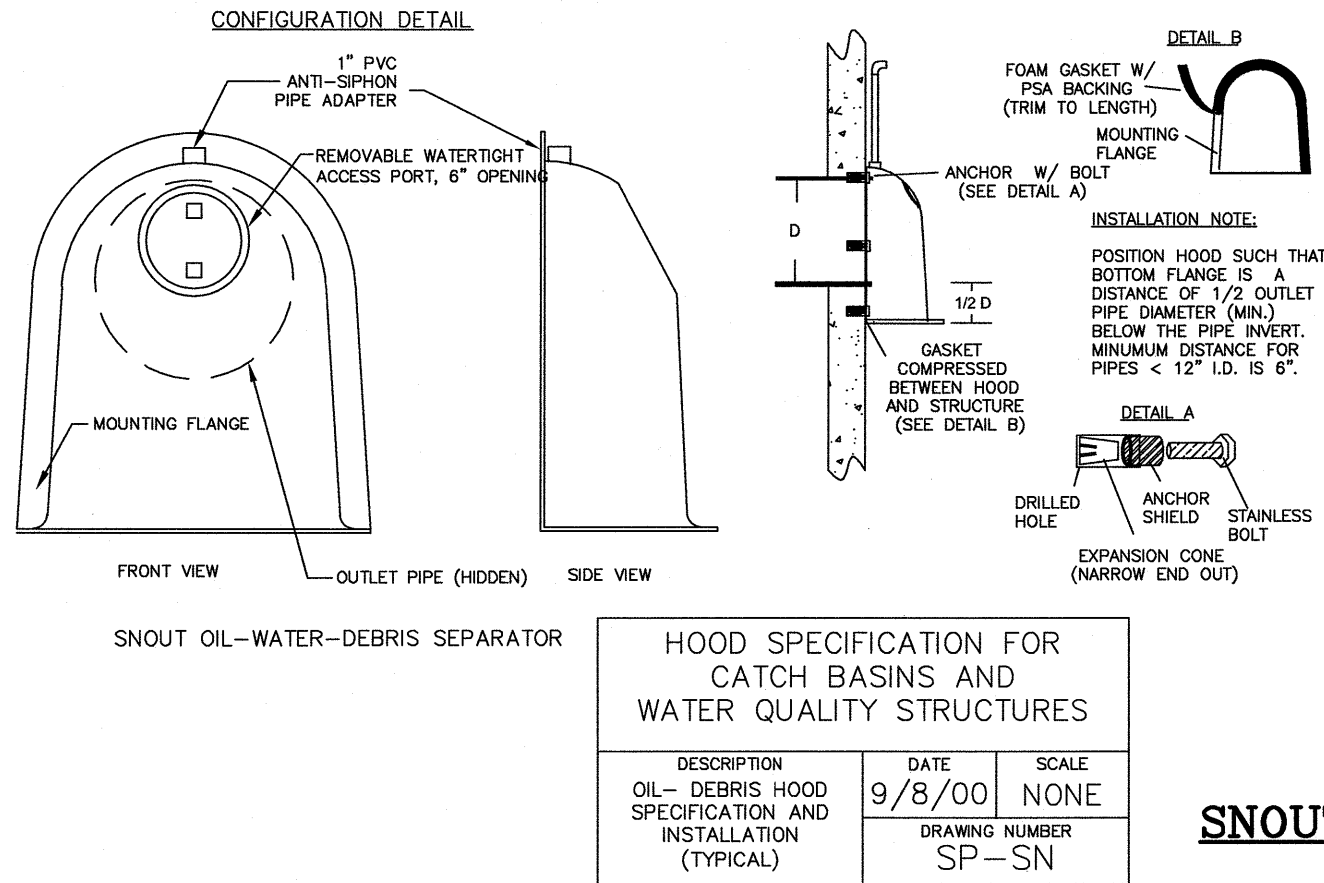
NOTES:

- 1) PROVIDE SIX STORMTECH SC-310 CHAMBERS PER TOWNHOUSE UNIT.
- 2) THE INSTALLATION AND MAINTENANCE OF THE ROOF INFILTRATION UNITS IS A REQUIREMENT PURSUANT TO THE ALTERATION OF TERRAIN PERMIT.
- 3) EACH ROW OF CHAMBERS SHALL BE SET ON A 6 INCH STONE BASE WITH 12 INCHES OF STONE ON ALL SIDES AND 6 INCHES OF STONE OVER THE TOP OF THE CHAMBERS.

STORMTECH ROOF RECHARGE  
NOT TO SCALE

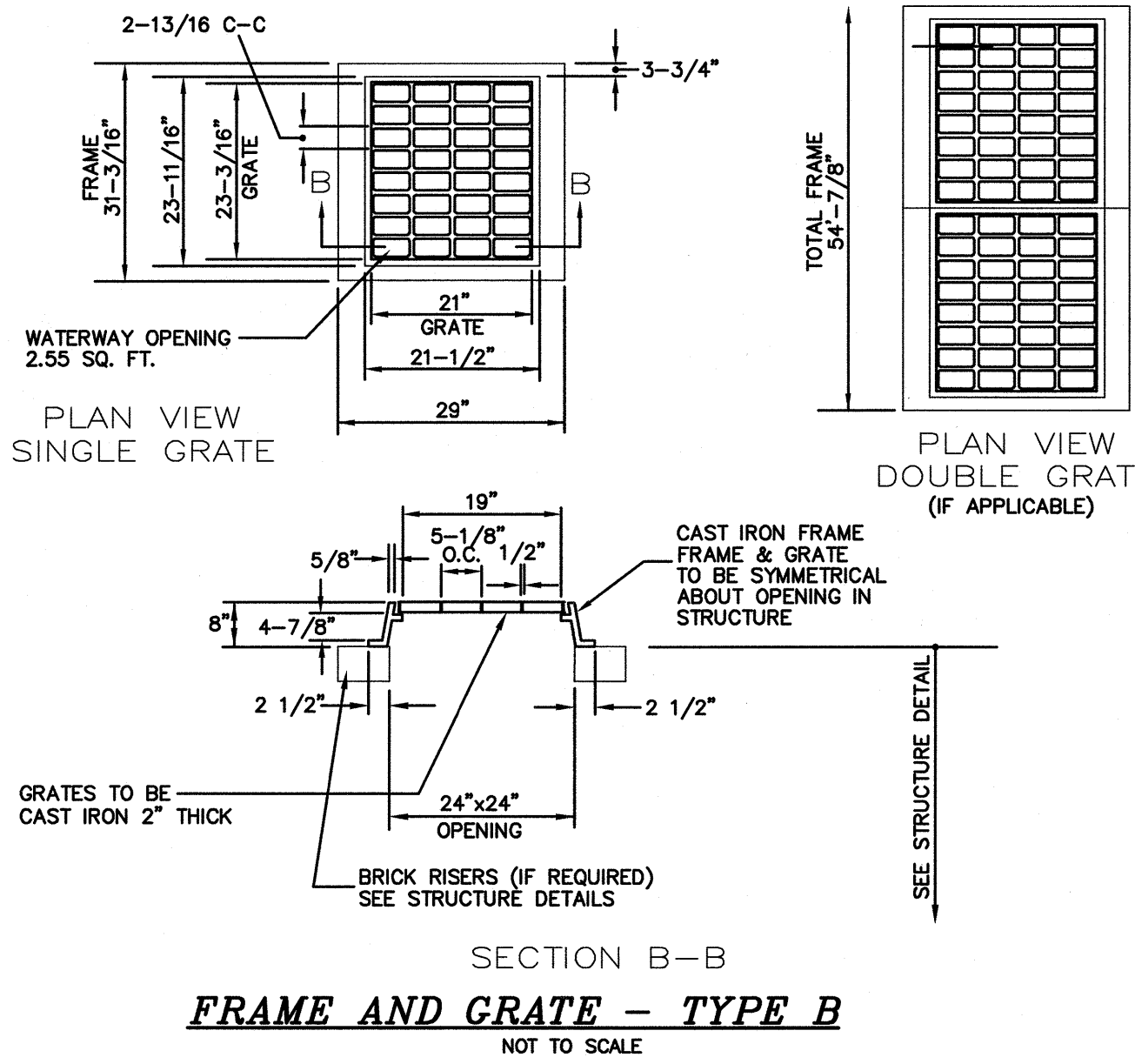


CHANNEL BLOCK DETAIL  
NOT TO SCALE

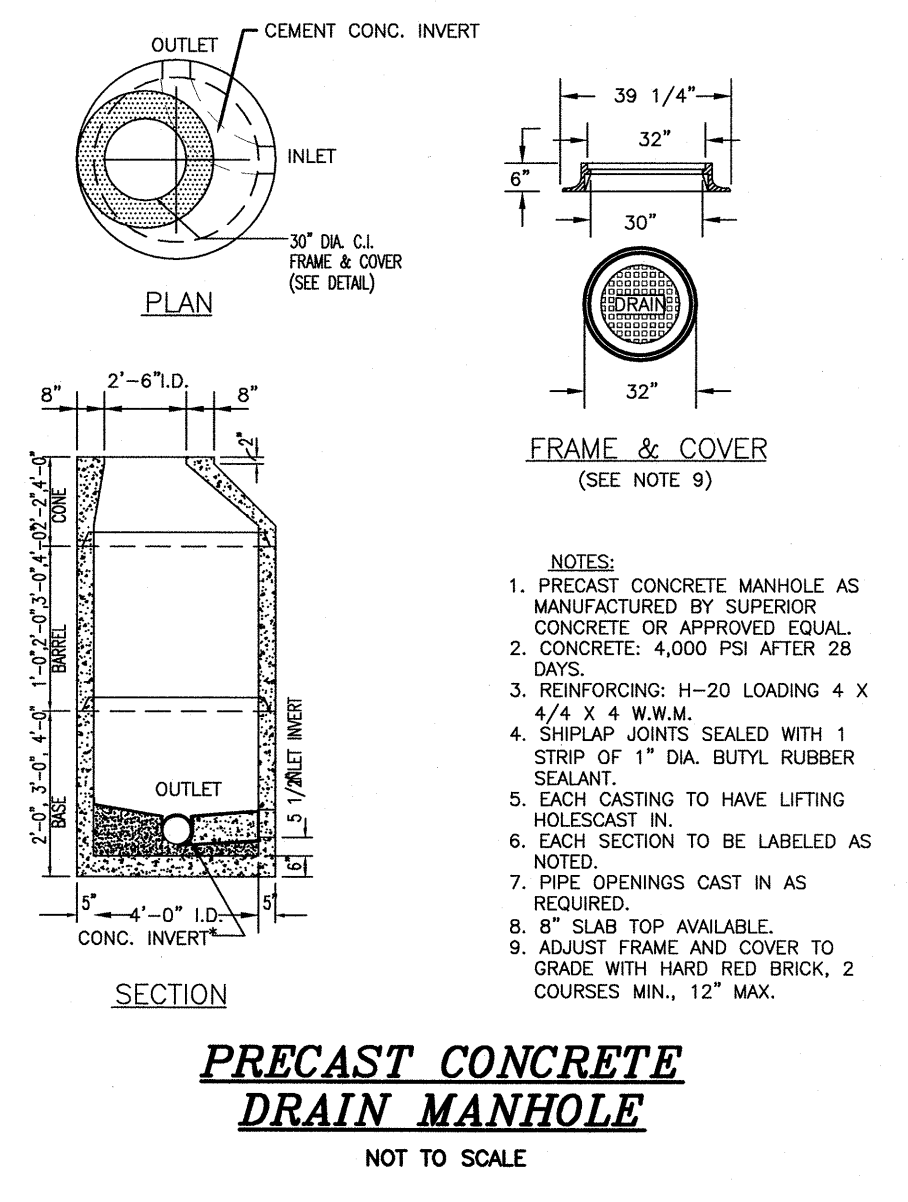


SNOUT OIL/WATER SEPARATOR  
NOT TO SCALE

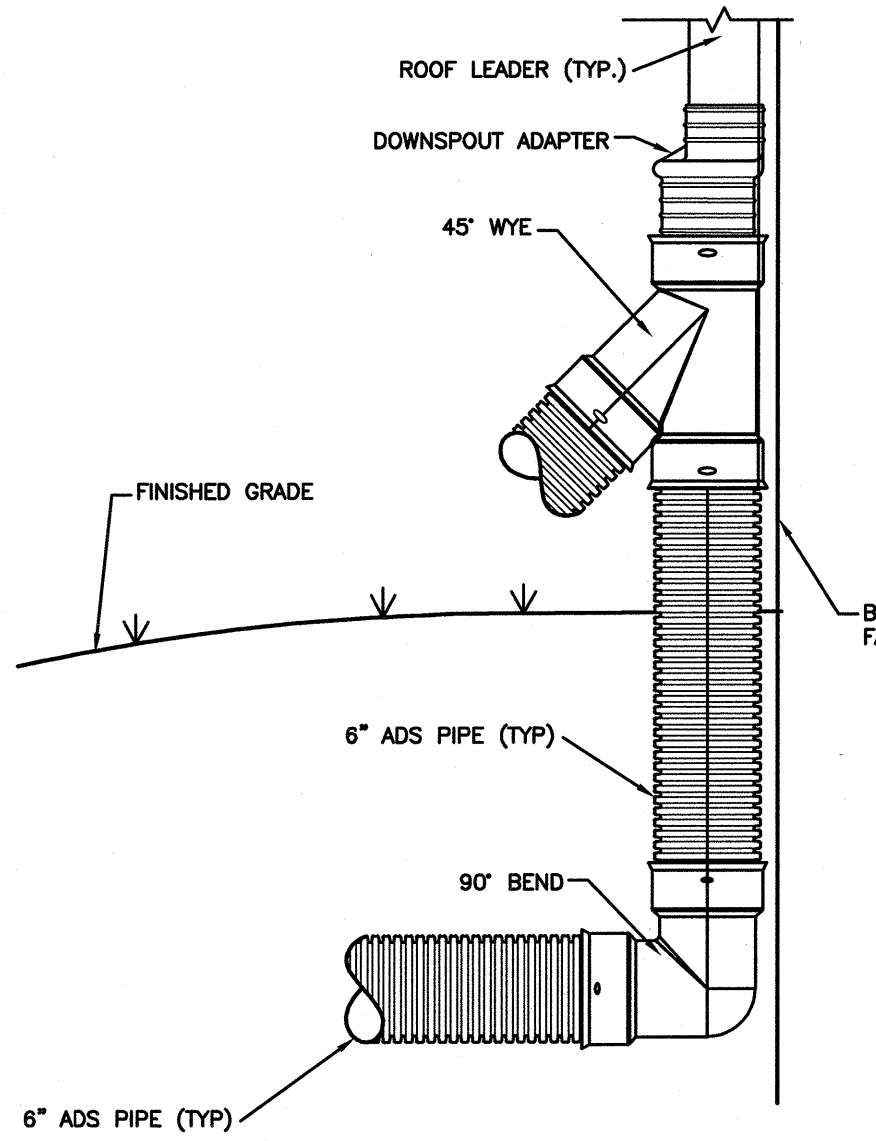
- NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 55 MT. ARCHER RD. LIME, CT 06377 (860) 434-0277, (860) 434-3195 FAX (860) 434-8008 OR (888) 354-7585 WEB SITE: [www.bestmg.com](http://www.bestmg.com) OR PRE-APPROVED EQUAL
  2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
  3. ALL HOODS SHALL BE EQUIPPED WITH A WATER TIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
  4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
  5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
  6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
  7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
  8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
  9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:  
A. INSTALLATION INSTRUCTIONS  
B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER  
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING  
D. 3/8" STAINLESS STEEL BOLTS  
E. ANCHOR SHIELDS
- US Patent # 6126817



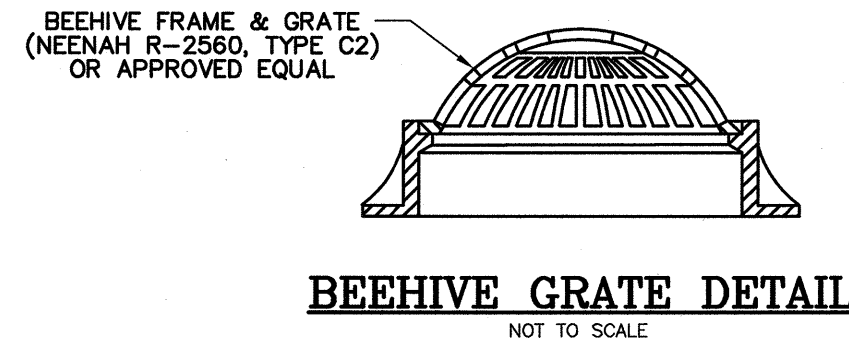
FRAME AND GRATE - TYPE B  
NOT TO SCALE



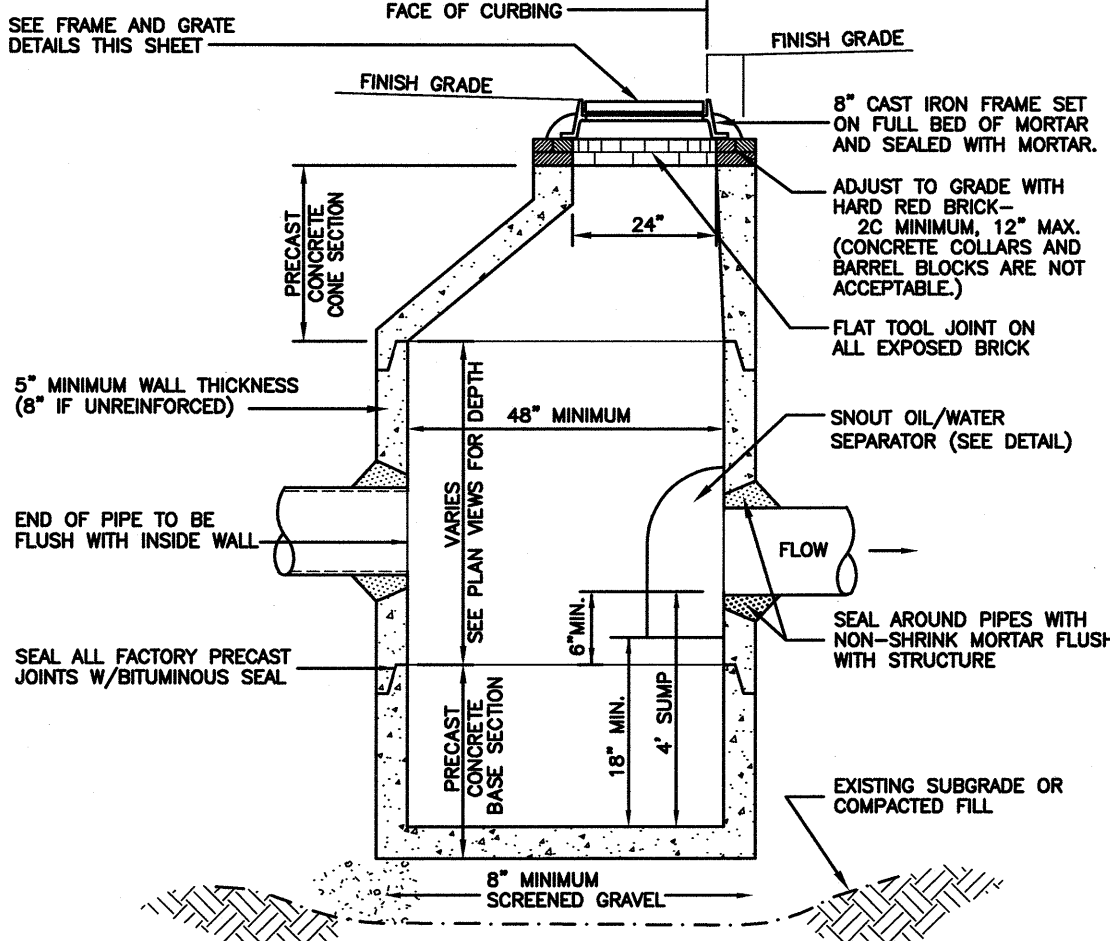
PRECAST CONCRETE  
DRAIN MANHOLE  
NOT TO SCALE



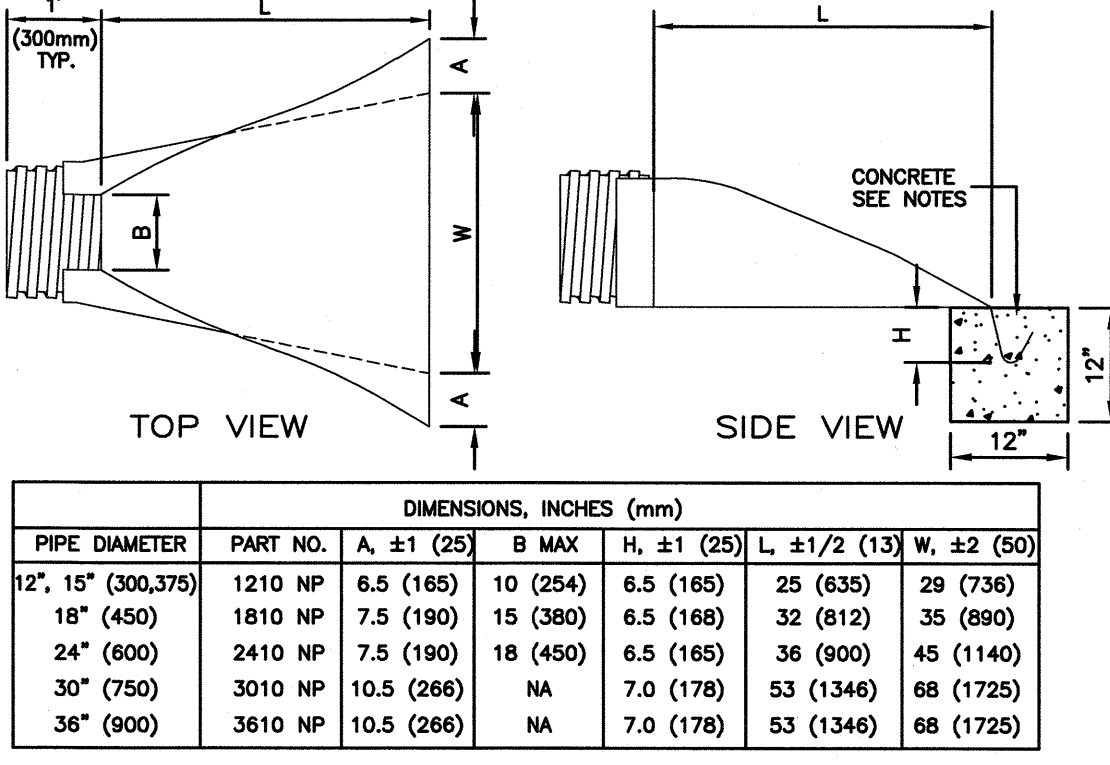
ROOF DRAIN DETAIL WITH OVERFLOW  
NOT TO SCALE



BEEHIVE GRATE DETAIL  
NOT TO SCALE



DEEP SUMP CATCH BASIN  
ECCENTRIC CONE  
(FOR USE IN CURBED AREAS)  
N.T.S.

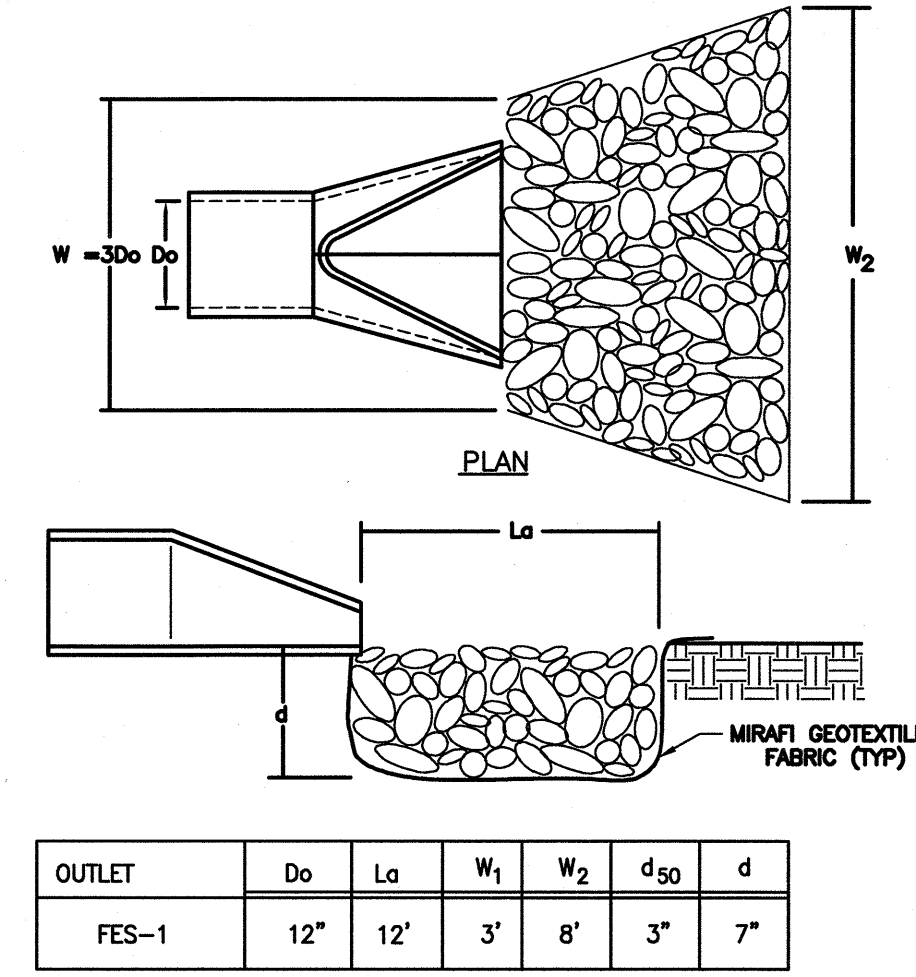


CONSTRUCTION SPECIFICATIONS:

1. PREPARE BEDDING:  
BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE. PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION. EXCAVATE AN AREA IN THE BEDDING WHERE THE TROUGH WILL BE PLACED SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.
2. PLACE END SECTION OF PIPE:  
OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.
3. SECURE THE END SECTION:  
SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.
4. SECURE THE TROUGH:  
TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:  
SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.

FLARED END SECTION  
HIGH DENSITY POLYETHYLENE (HDPE)  
NOT TO SCALE



OUTLET	Do	La	W1	W2	d50	d
FES-1	12"	12'	3'	8'	3"	7"

PIPE DIAMETER	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
12", 15" (300,375)	1210 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)
18" (450)	1810 NP	7.5 (190)	15 (380)	6.5 (165)	32 (812)	35 (890)
24" (600)	2410 NP	7.5 (190)	18 (450)	6.5 (165)	36 (900)	45 (1140)
30" (750)	3010 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)
36" (900)	3610 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)


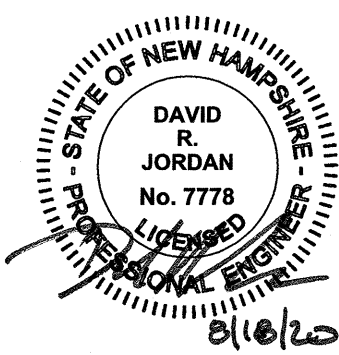
CONSTRUCTION NOTES:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. THE MEDIAN STONE DIAMETER FOR THE RIP-RAP APRON IS 450. FIFTY PERCENT BY WEIGHT OF THE RIP-RAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN STONE SIZE. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 450.

FORMULAS USED (REFERENCE NHDES STORMWATER MANUAL, VOL. 2, PAGE 174)

ROCK RIP-RAP GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE IN INCHES
100	5.3 TO 7.1
85	4.8 TO 6.4
50	3.5 TO 5.3
15	1.1 TO 1.8

NO.	DESCRIPTION	BY	DATE
REVISIONS			
CONSTRUCTION DETAILS			
THE VILLAS AT NORTH TUSCAN VILLAGE – PHASE 3 11 CENTRAL STREET SALEM, NEW HAMPSHIRE SALEM PROPERTY MAP 98 LOT 12542 BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC			
		Engineering Design Planning Construction Management	Greenman-Pedersen, Inc. 44 Stiles Road Suite One Salem, NH 03079
603.893.0720		GPINET.COM	
SCALE: N.T.S.		DATE: AUGUST 18, 2020	
		PREPARED FOR BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC 17 MAIN STREET HOPKINTON, MA 01748 BOOK 5810–PAGE 1414	
		SALEM PLANNING BOARD APPROVAL	
ZONE: COMMERCIAL–INDUSTRIAL 'C' & RESIDENTIAL			
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.
DRJ	CPS/DRJ	4214DET-PH3	421417
		SHEET No.	
		12 OF 13	

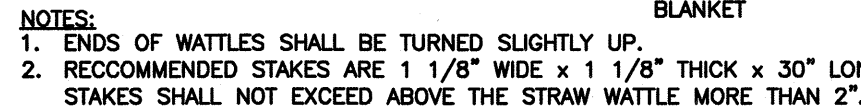




1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURERS SPECIFICATIONS.
2. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

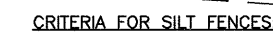
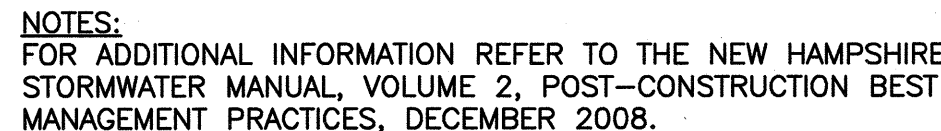
BLANKET CHANNEL PROTECTION  
FOR EROSION CONTROL

NOT TO SCALE



## STRAW WATTLE DETAIL

NOT TO SCALE



1) SILT FENCE FILTER CLOTH: THE FABRIC FOR THE SILT FENCE SHALL MEET THE FOLLOWIING SPECIFICATIONS:

	MINIMUM ACCEPTABLE VALUES	TEST METHOD
FABRIC PROPERTIES:		
GRAB TENSILE STRENGTH (lbs)	90	ASTM D1682
ELONGATION AT FAILURE (%)	50	ASTM D1682
MULLEN BURST STRENGTH (PSI)	190	ASTM D3786
PUNCTURE STRENGTH (lbs)	40	ASTM D751
EQUIVALENT OPENING SIZE	40-80	US STD SIEVE

2) FENCE POSTS (FOR FABRICATED UNITS) - THE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG. WOOD POSTS WILL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS WILL BE STANDARD T OR U SECTIONS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. MAXIMUM SPACING SHALL BE 6 LINEAR FEET.

3) WIRE FENCE (FOR FABRICATED UNITS) - WIRE FENCING SHALL BE A MINIMUM 14.5 GAUGE WITH A MAXIMUM 6 INCH MESH OPENING.

MAINTENANCE:

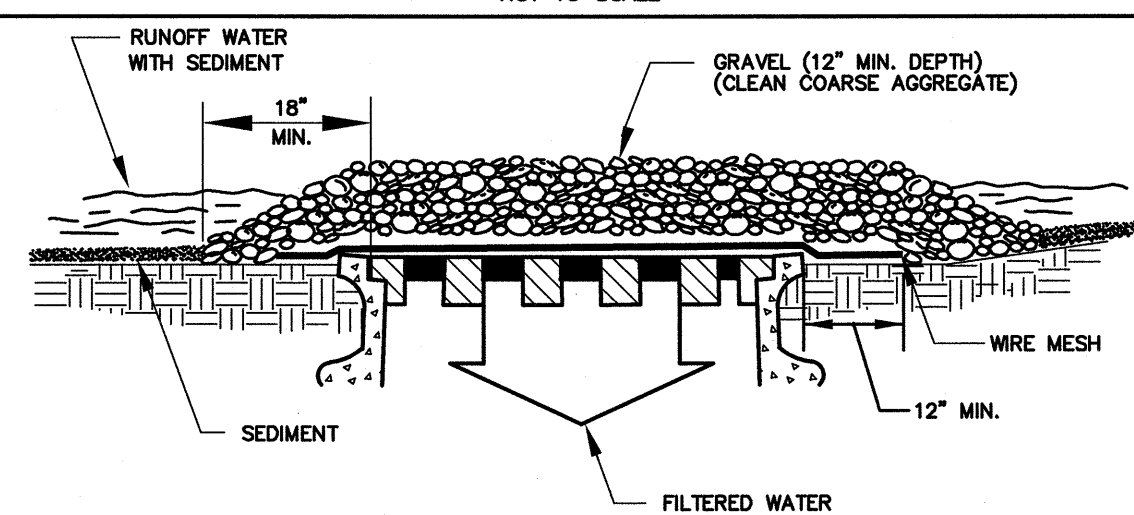
- 1) SILT FENCES SHALL BE RECHECKED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
- 2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3) SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- 4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

CONSTRUCTION SPECIFICATIONS:

- 1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- 2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND (4" DEEP & 4" WIDE) AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- 3) WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- 4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP OF THE SECTION AND BOTTOM OF THE SECTION.
- 5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES (24" IS PREFERRED), FOLDED, AND STAPLED.
- 6) POSTS TO BE SPACED AT A MAXIMUM OF 6' ON CENTER.

### SEDIMENT CONTROL FENCE

NOT TO SCALE



## MAINTENANCE

1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY.
2. SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF OF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS.
3. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.
4. ALL STRUCTURES WITH INLET PROTECTION MUST BE CLEANED AT THE END OF CONSTRUCTION AND WHEN THE SITE IS FULLY STABILIZED.

## INLET PROTECTION

NOT TO SCALE



TEMPORARY EROSION  
CONTROL MEASURES:

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
2. MAY BARE SLOPES AND SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
3. BAILED HAY AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS SPECIES GROWN FROM SEEDS OF GRASSES OR WOODY STEMS, AND SHALL BE FREE, NO SALT HAY SHALL BE USED.
4. FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
5. STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SILTATION FENCE AND MULCHING TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
6. ALL DISTURBED AREAS SHALL BE LOADED AND SEEDED, A MINIMUM OF 4 INCHES OF LOAM SOIL MUST BE INSTALLED AND THE RATE AS SPECIFIED.
7. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
8. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
9. ALL CATCH BASIN INLETS WILL BE PROTECTED WITH LOW POINT SEDIMENTATION BARRIER.
10. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
11. ALL Dewatering OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.
12. JUTE MATTING OR APPROVED EQUIVALENT SHALL BE PROVIDED ON ALL SLOPES GREATER THAN 3:1.

**CONSTRUCTION**  
**SEQUENCE NOTES:**

1. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY ON-SITE CONSTRUCTION AS SHOWN. ADDITIONAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.
2. CONSTRUCT TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THIS SHEET.
3. CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
4. REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEED TO PREVENT EROSION.
5. CONSTRUCT RAIN CATCHMENTS. THE BASES OF THE RAIN CATCHMENTS SHALL BE DEEPLY TILLED TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH LEVELING DRAG. STORMWATER FLOWS ARE NOT TO BE DIRECTED TO THE ROAD GRADIENTS UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
6. CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES ALONG THE SIDES OF THE ROADWAYS TO STABILIZE THE EROSION. STABILIZE ROADWAY PARKING LOTS AND CUT/FILL SLOPES WITHIN 72-HOURS OF ACHIEVING FIN GRADES.
7. INSTALL UNDERGROUND UTILITIES AND DRAINAGE SYSTEM.
8. BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND SLOPES SHALL BE SEED OR MULCHED WITHIN 72-HOURS OF ACHIEVING FINISHED GRADES.
9. DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND, IF NECESSARY, MAINTAIN TEMPORARY BERMES, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. AT A MINIMUM, INS EROSION CONTROLS WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
10. BEGIN EXCAVATION FOR CONSTRUCTION OF BUILDINGS.
11. FINISH PAVING ALL ROADWAYS AND DRIVEWAYS.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
14. APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPANIED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

<u>Limestone:</u> 138 lbs./1,000 square feet	
<u>Fertilizer:</u> 138 lbs./1,000 SF	
<u>Mulch:</u> hay mulch approximately 3 tons/acre unless erosion control matting is used.	
- |                           |              |
|---------------------------|--------------|
| <u>Permanent Seed Mix</u> |              |
| Creeping Red Fescue       | 20 LBS./ACRE |
| Tall Fescue               | 20 LBS./ACRE |
| Redtop                    | 2 LBS./ACRE  |
| TOTAL                     | 42 LBS./ACRE |
- |                               |               |
|-------------------------------|---------------|
| <u>Temporary Seed Mix:</u>    |               |
| Winter Rye (Aug. 15–Sept. 15) | 112 LBS./ACRE |
| Oats (No later than May 15)   | 80 LBS./ACRE  |
15. NEWLY GRADED AREAS REQUIRING SOLE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE HAY MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 2 TONS PER ACRE.
16. THE CONTRACTOR AND DEVELOPER MUST MANAGE THE PROJECT TO MEET THE REQUIREMENTS AND INTENT OF FGA 4.30-513 AND AGR 3800 RELATIVE TO INVASIVE SPECIES
17. FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH ENY-A-1000.

***EROSION CONTROL NOTES:***

1. THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE NH STORMWATER MANUAL, VOLUME 3, EROSION & SEDIMENT CONTROLS CONSTRUCTION, DECEMBER 2008.
2. DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED; THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED AND LEFT OPEN TO THE WEATHER, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AS APPROVED BY THE ENGINEER. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
3. LIMIT OF MAXIMUM AREA OF EXPOSED SOIL AT ANY ONE TIME TO LESS THAN 5 ACRES, THE EXPOSED AREA THAT IS BEING ACTIVELY WORKED DURING WINTER IS TO BE LESS THAN 3 ACRES DURING THE WINTER.
4. ALL PERMANENT STORM WATER STRUCTURES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
  - B) A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
  - C) A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
  - D) OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
5. SILT FENCE SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT, WHERE POSSIBLE, GRAVEL DRAINAGE WAY SHOULD BE USED AND LEFT OPEN TO ALLOW EXCESS SURFACE WATER. SILT FENCE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
6. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISHED GRADED, WITH NO FURTHER CONSTRUCTION TO TAKE PLACE, SHALL BE LOADED AND SEEDED WITHIN 72 HOURS AFTER FINAL GRADE OF UNIFORM MINIMUM 100% SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. THE SEED MIX SHALL BE AS DESIGNATED BELOW.
7. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. MULCH SHALL BE 2 INCHES THICK. MULCH SHALL BE APPLIED TO ALL AREAS WITHIN 45 DAYS. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDD AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNPOOLED, AIR DRIED, AND FREE FROM WEED, SEEDS AND ANY CONVERSE MATERIAL.
8. DURING GRADING OPERATIONS INSTALL HAY BALE BARRIERS ALONG TOE OF SLOPE OF FILL AREAS WHERE SHOWN. BARRIERS ARE TO BE SPACED 100 FEET. DISTURBED AREAS ARE PAVED OR GRASSED.
9. THE FILL MATERIAL SHALL BE OF APPROVED SOIL TYPE FREE FROM STUMPS, ROOTS, WEED, ETC. PREVIOUS TO CONSTRUCTION. ALL EQUIPMENT, INCLUDING TRAILERS, TOWERS OR ROLLERS WILL BE USED FOR COMPACTION BY ROUTING THE EQUIPMENT TO ALL AREAS ON EACH LAYER.
10. AVOID THE USE OF FUTURE OPEN SPACES (LOAM & SEED) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ROADS.

WINTER STABILIZATION NOTES:

## MAINTENANCE REQUIREMENTS

Maintenance measures should continue as needed throughout construction, including the use of erosion control blankets, until the final stabilization of the site. The contractor should conduct an inspection of all installed erosion control measures and perform repairs to ensure their continuing function.

3. **Stabilization of Erosion Control Blankets** - Beginning prior to the onset of the winter season, the contractor should conduct an inspection in the spring to ascertain the condition of vegetation and erosion control blankets. Erosion control blankets should be replaced on an established vegetative cover (at least 85% of area vegetated with healthy, vigorous growth). SPECIFICATIONS:

1. To protect water quality during cold weather and during spring runoff, the following stabilization techniques should be employed during the period from October 15th through May 15th.
  - a. Erosion control blankets should be inspected for signs of disturbance or displacement against erosion by the methods described in this section prior to any thaw or spring melt event. Subject to applicable regulations, the allowable area of exposed soil may be increased if the contractor can demonstrate that the exposed area is protected by other means. A professional engineer licensed to practice in the state of New Hampshire or a Certified Professional in Erosion and Sediment Control as certified by the CSPESC Company of EnviroCert International, Inc. shall be required to certify any such increase.
2. Stabilization as follows should be completed within a day of establishing the grade that is to be stabilized by the other means:
  - a. All proposed vegetated areas having a slope of less than 15% which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, should be secured and covered with erosion control mix. Erosion control mix should be secured with anchored netting, or 2 inches of erosion control mix (see description of erosion control mix in Item 10.00).
  - b. All proposed vegetated areas having a slope of greater than 15% which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, should be secured and covered with erosion control blankets. Erosion control blankets or with a minimum 4 inch thickness of erosion control mix, unless otherwise specified by the manufacturer. Note that compost blankets should not exceed 2 inches in thickness or weight.
  - c. All stone-covered slopes must be constructed and stabilized by October 15.
3. Erosion control blankets or mulch or erosion control mix should not occur over snow of greater than one inch in depth.
4. All mulch applied during winter should be anchored (e.g., by netting, tracking, wood cellulose

6. Stockpiles of soil materials should be mulched for over winter protection with hay or straw to twice the normal rate and with a four-inch layer of erosion control mix. Mulching should be completed by September 24 hours prior to the first snowfall. No straw or hay should be placed (even covered with mulch) within 100 feet from any wetland or riparian resource.

7. Frozen materials, (e.g., frost layer that is removed during winter construction), should be stockpiled separately and in a location that is away from any area needing to be protected. The removal of frozen materials from the work area will become unworkable and difficult to transport due to the high moisture content in the soil.

8. Installation of erosion control blankets should not occur over snow of greater than one inch in depth or over frozen ground.

9. All grass-lined ditches and channels should be constructed and stabilized by September 1. All stone-lined ditches and channels should be constructed and stabilized by October 15th or when the professional engineer or a Certified Professional in Erosion and Sediment Control as certified by the CSPESC Company of EnviroCert International, Inc. if a stone lining is necessary, the contractor may be required to provide a separate section of the specification for the section allowing for placement of the stone.

10. All stone-lined ditches and channels must be constructed and stabilized by October 15th. Erosion control blankets should be installed over the ditch and channels to be prepared for the winter season, ditch should be protected with a minimum of 3 inches of crushed gravel per NHDOT

12. Sediment barriers that are installed during frozen conditions should consist of erosion control mix berms, or continuous contained berms. Silt fences and hay bales should not be used when the ground is frozen.


NO.	DESCRIPTION	BY	DATE
REVISIONS			

## CONSTRUCTION DETAILS

THE VILLAS AT NORTH TUSCAN VILLAGE - PHASE 3  
11 CENTRAL STREET  
SALEM, NEW HAMPSHIRE  
SALEM PROPERTY MAP 98 LOT 12542  
BLACK BROOK REALTY TUSCAN VILLAGE NORTH, LLC

**GPI**  
603.893.0720

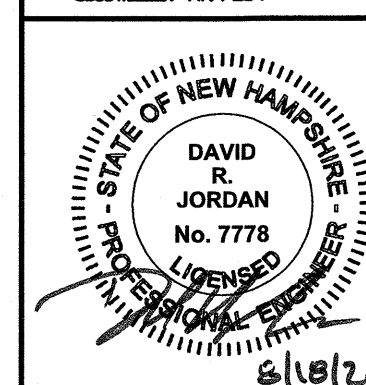
Engineering  
Design  
Planning  
Construction Management

**GPINET.COM**

Greenman-Pedersen, Inc.  
44 Stiles Road  
Suite One  
Salem, NH 03079

SCALE: NNTS

DATE: AUGUST 18, 2020



PREPARED FOR  
BLACK BROOK REALTY  
TUSCAN VILLAGE NORTH, LLC  
17 MAIN STREET  
HOPKINTON, MA 01748  
BOOK 5810—PAGE 1414

ZONE: COMMERCIAL—INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CPS/DRJ	4214DET-PH3	421417	13 OF 13

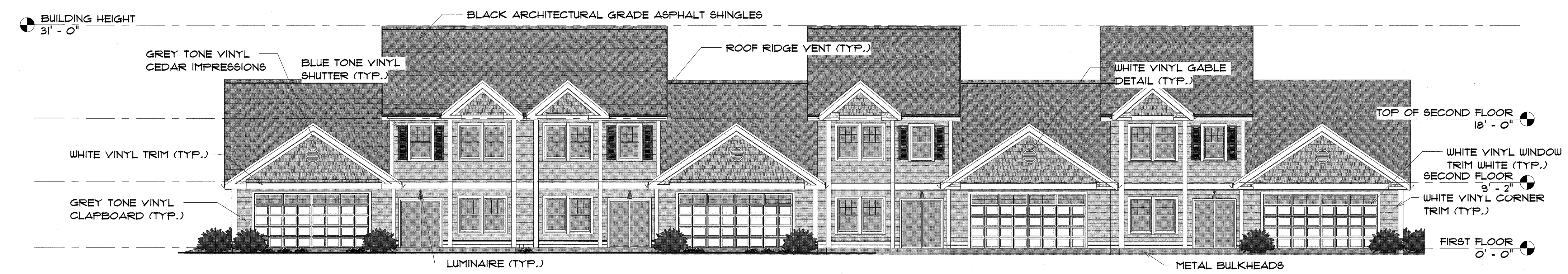








STREET VIEW - SCHEME C



REAR ELEVATION - SCHEME C



DESIGN FOR:  
**BLACK BROOK REALTY**  
**NORTH TUSCAN VILLAGE**

SALEM, NH  
 SEPTEMBER 26, 2019

**GAVIN AND SULLIVAN ARCHITECTS, INC.**

128 WARREN STREET  
 LOWELL, MA 01852





FRONT ELEVATION - SCHEME 2



REAR ELEVATION - SCHEME 2

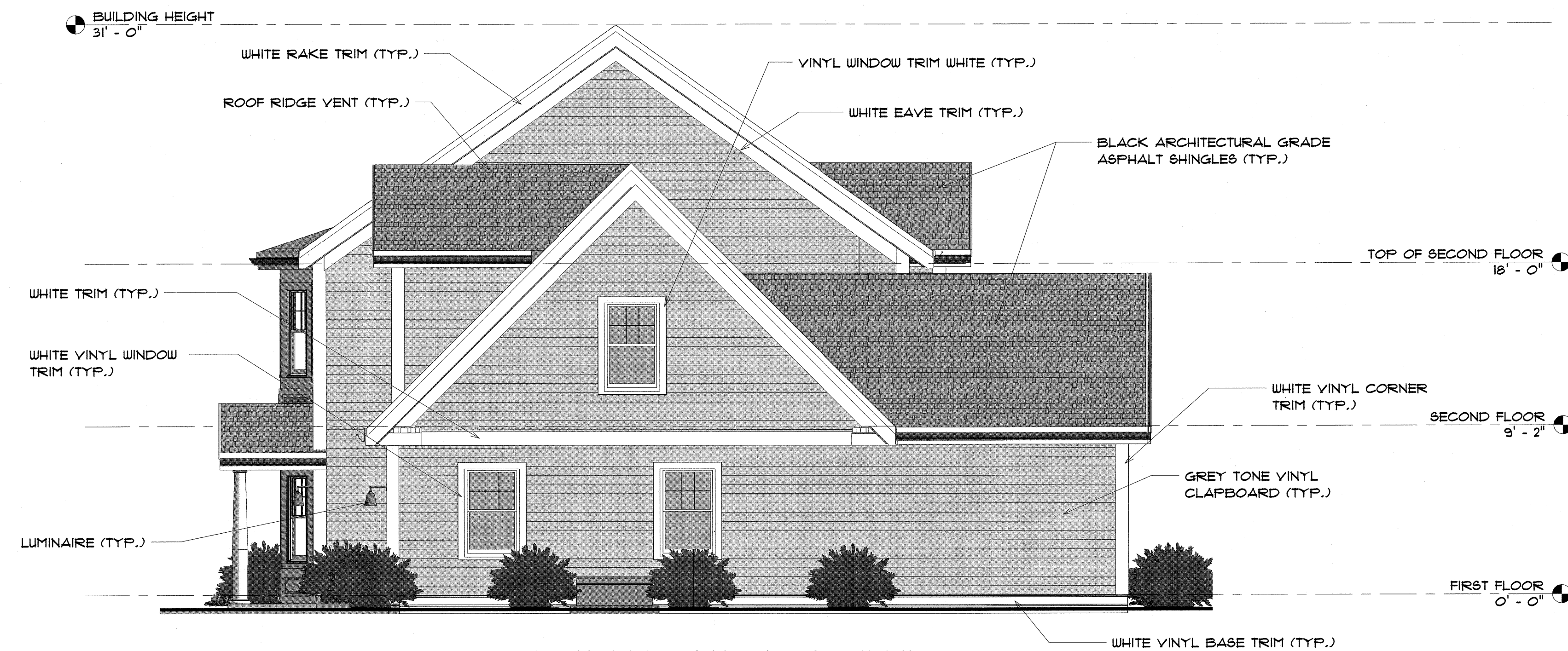
DESIGN FOR:  
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SEPTEMBER 26, 2019

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RIGHT ELEVATION - SCHEME 2



LEFT ELEVATION - SCHEME 2

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**NORTH TUSCAN VILLAGE**

SALEM, NH  
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