Leicester Zoning Board of Appeals
Special Permit & Variance Application Form

PERMIT TYPE: ☑ Special Permit ☐ Variance **Date:** October 8, 2021

CONTACT INFORMATION

Property Owner:			
Name:	Peter DiGioia; Resident Agent		
Company Name:	Ayers & DiGioia, LLC		
Signature:	Peter J DiGioia		
Address:	40 Superior Road; Worcester, MA 01604		
Phone:	(508) 933-7295	**Email:**	peter@linvestproperties.com
Applicant:			
Name:	Same		
Company Name:			
Signature:			
Address:			
Phone:		**Email:**	
Primary Contact Person: *(The person that will be contacted by Town staff during the application process.)*			
Name:	Same		
Company Name:			
Address:			
Phone:		**Email:**	

PROJECT INFORMATION

Project Address:	25 Pleasant Street	**Zoning District:**	R2
Assessors Map & Parcel #	20D D13		
Deed Reference (Book/Page):	65301 / 187		
Size of Proposed Structures:	3,000 SF	**Total Lot Area:**	26,289 SF
Water Source:	Leicester Water & Sewer	**Sewer Source:**	Leicester Water & Sewer
Applicable Zoning Bylaw Section(s):	1.4 Nonconformity; 6.4.02 Special Permits; 7.1.04.2 Special Permit Uses		

Brief Project Description:

Please include a brief description on this form (i.e. do not write "see attached"). *[Examples: construction of a 10' x 20' shed in the front yard of an existing home; installation of a 60s.f. freestanding sign (special permit required to exceed 50 s.f.)]*

The previous dilapidated structure was demolished and the existing lot is vacant. The applicant proposes to construct a two - (2) family residence. Each three - (3) bedroom unit will be sold as a condominium in accordance with standard practices. Each unit will be approximately 2,500 SF, which includes a one - (1) car garage. Each unit will have separate driveways with vehicle turning areas.

PROJECT INFORMATION, Continued

State Briefly Reasons for Variance or Special Permit:

See Zoning Board of Appeals Instructions for Variance and Special Permit Applications. You may use the space below and/or attach additional pages as necessary to fully describe the application and reasons for the variance or special permit.

This application request is to AMEND a Special Permit Decision granted by the Leicester ZBA January 4, 2021 and recorded with the Worcester County Registry of Deeds January 4, 2021. Bk: 64145 Pg: 365.

The amended, proposed construction and building plans include limited changes to the previously approved plans. The proposed changes are as follows:

1. Farmer's porches and enclosed front entries are proposed. See Plans for Construction "Front View Details" (1 of 13) and "First Level Details" (5 of 13). The proposed plans refer to the entirety of this area as "Farmer's Porch".

2. There is an increase in the impervious area. The previously approved impervious area was 20% (5,258 SF). The proposed, amended plan, revised 09/06/2021, indicates an impervious area of 25.3% (6,658 SF). The impervious area remains less than 30%. The net increase is 5.3% (1,400 SF).

3. There is a corresponding increase in the CULTEC Drywell Storage Calculation. The previously approved calculation was 1,371 CF (10,259 G). The proposed, amended plan, revised, 09/06/2021, indicates a calculation of 1,737 CF (12,991 G). The net increase is 26.7 % (366 CF / 2,732 G).

The applicant does not consider the limited changes in conflict with the "Findings" of the previously approved SP. Changes to the "Conditions" of the previously approved SP have been addressed in the Proposed Building Plan, CULTEC Drywell Calculation and Proposed, Schematic CULTEC Recharger Plan.

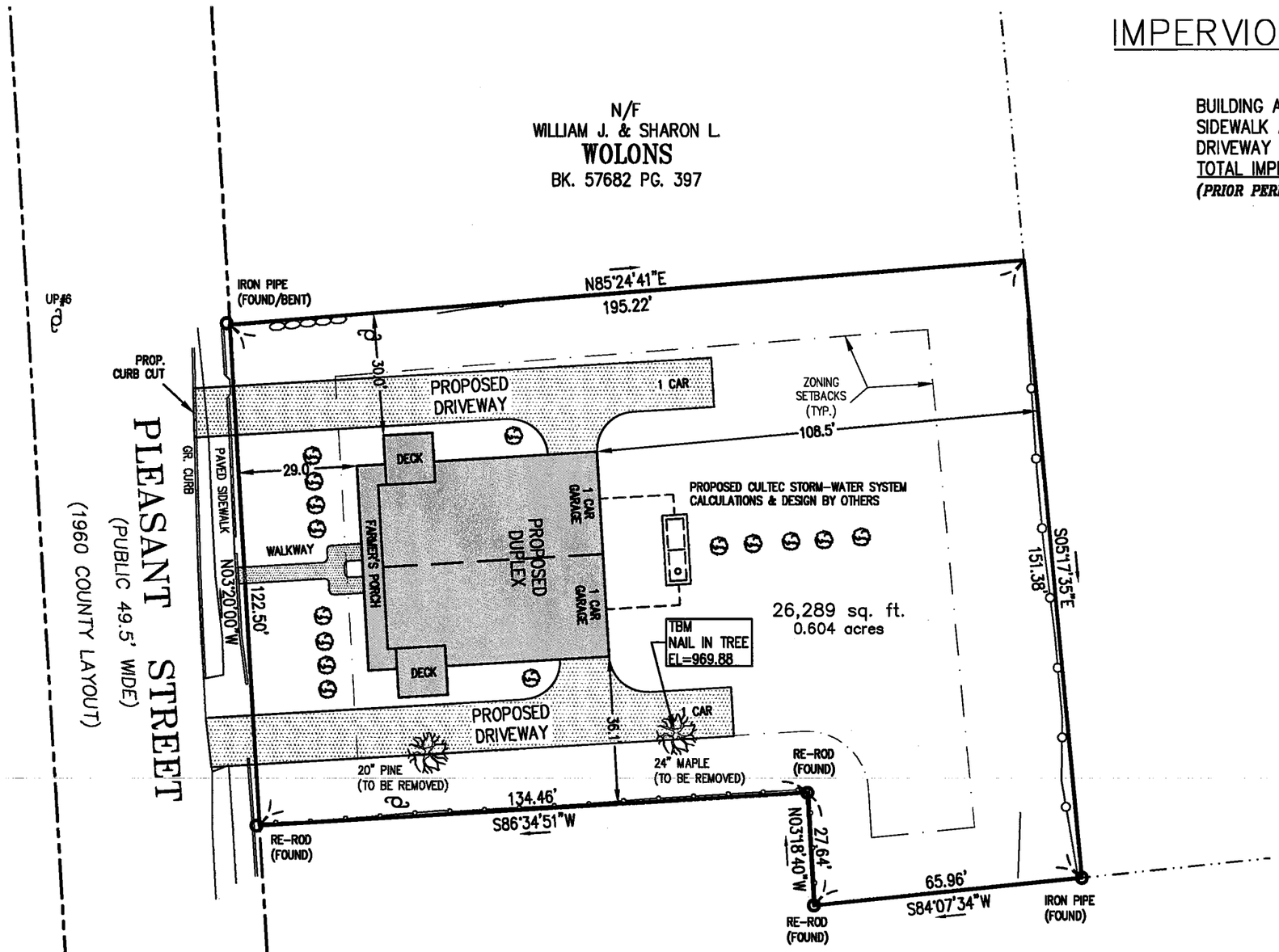
APPLICATION CHECKLIST:

Use this checklist to ensure you have provided all required information.
***Three (3)** copies of all paper submittals are required except where noted.*

☑ Application Form	☑ Any supplemental information where applicable (letters, detailed project information, etc.)	☑ Plans (1-full-size & 2 11"x17")
☑ Certified Abutters List (1 copy)	☑ Fee ($175) - check payable to the Town of Leicester	☑ .pdf copy of <u>all</u> submitted documents (CD or USB Drive)

Submit the full application to the Town Clerk's Office

g:\town planners office\zoning board of appeals\application form and instructions\zba application form, 2019-07.docx



IMPERVIOUS MATERIAL:

BUILDING AREA: 3,118 S.F.
SIDEWALK AREA: 173 S.F.
DRIVEWAY AREA: 3,367 S.F.
TOTAL IMPERVIOUS AREA: 6,658 S.F. = 25.3%
(PRIOR PERMITTED AREA = 20.0%)

DEED REF: 65301/187
ZONED: R2
ASSESSORS REF: 20D D13

COMMONWEALTH OF MASSACHUSETTS
ROBERT J. SMITH 39668 PROFESSIONAL LAND SURVEYOR

ROBERT J. SMITH

Sept. 6, 2021
DATE

ZONE: R2

REQUIRED:

MIN. FRONTAGE: 125'
MIN. AREA: 20,000 S.F.
FRONT SETBACK: 25'
SIDE SETBACK: 15'
REAR SETBACK: 25'

GRAPHIC SCALE
1"=30'
30 0 30 60 90

PROPOSED BUILDING PLAN

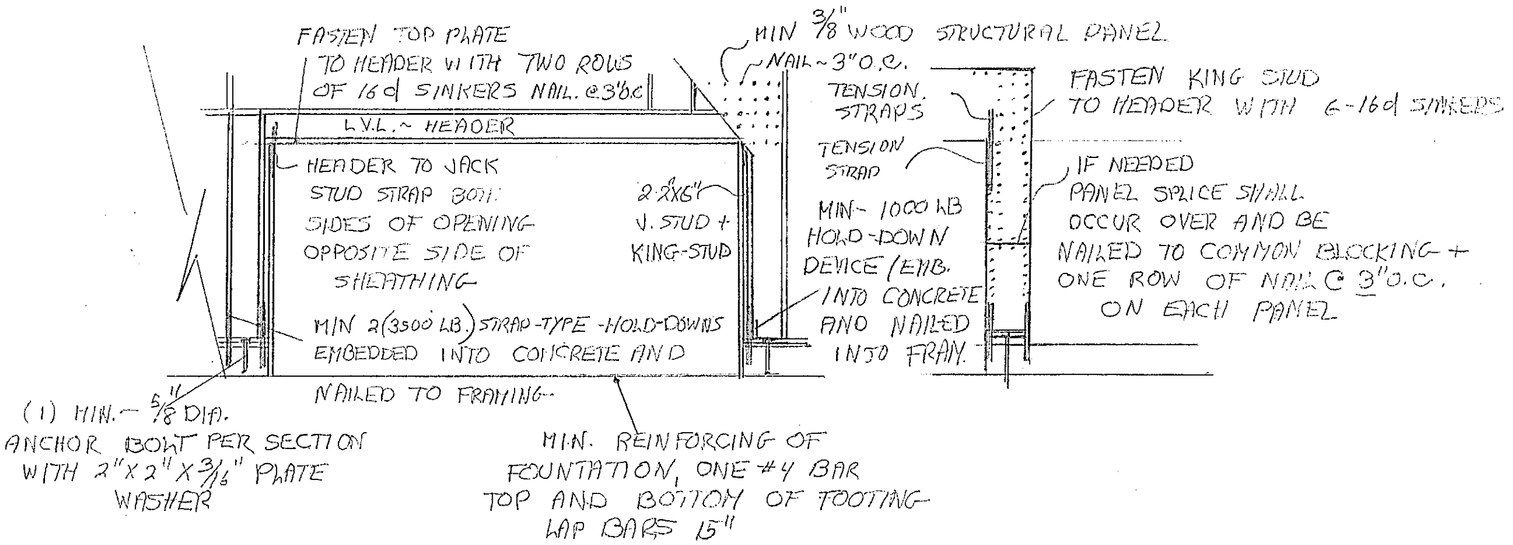
PREPARED FOR:
AYERS & DIGIOIA, LLC
25 PLEASANT STREET
LEICESTER, MASSACHUSETTS

SCALE: 1"=30' DATE: REV. 9/6/21 JULY 9, 2021

B&R SURVEY, INC.
PROFESSIONAL LAND SURVEYORS
100 GROVE STREET
WORCESTER, MA 01605
TEL. 508.756.8579
FAX. 508.421.4797

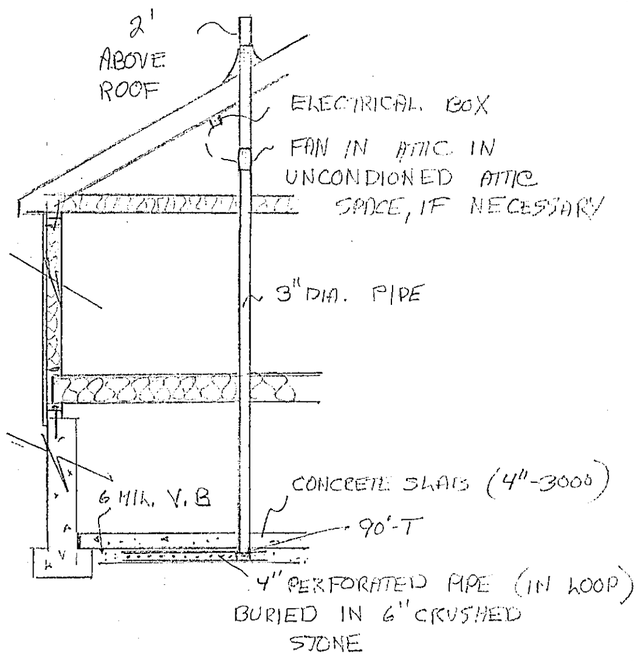
DRAWN BY: RPB PROJECT NO. 20-190

PORTAL FRAMING WITH HOLD-DOWNS



PASSIVE RADON SYSTEM USING DRAIN TILE LOOP

IN 6" OF GRAVEL ~ DRAIN TILE LOOP + 6 MIL. POLYETHYLENE SHEETING ~ CONNECT WITH T-CONNECTOR TO 3" (90°T) PIPE TO 12" ABOVE ROOF., PROVIDE FOR FAN IN ATTIC WITH ELECTRICAL BOX IF NECESSARY OR REQUIRED BY LOCAL CODES AND CONDITIONS



SOLAR-READY PROVISIONS ~ IN ACC. WITH U103

~ DWELLINGS WITH NOT LESS THAN 600 SQ FT. OF ROOF AREA ORIENTED BETWEEN 110° AND 270° OF TRUE NORTH SHALL COMPLY WITH SECTIONS U103.2 THROUGH U103.8 OF 2015 IRC-BOOK-

+ TOTAL SOLAR-READY ZONE SHALL NOT BE LESS THAN 300 SQ. FT.

+ PROVIDE FOR INTERCONNECTION PATHWAY FOR ROUTING OF CONDUIT OR PLUMBING FROM SOLAR PANEL TO THE ELECTRICAL SERVICE PANEL OR HOT WATER SYSTEM

+ RESERVE SPACE IN MAIN ELECTRICAL PANEL FOR A DUAL POLE CIRCUIT BREAKER FOR FUTURE SOLAR ELECTRICAL ~ SHALL BE LOCATED AT THE OPPOSITE (LOAD) END FROM INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION.

NOTES~

(H)~ R 314.8.1 HEAT DETECTORS SHALL BE PLACED ON OR NEAR CENTER OF THE GARAGE CEILING~ POWER SOURCE MAIN BUILDING~ WIRING

(V)~~ EXHAUST SYSTEMS

~CLOTHES DRYER EXHAUST M1502 VENT IN ACC. WITH MANUFACTURER'S INSTRUCTION

~ RANGE HOOD M1503~ + MICROWAVE OVENS

BATHROOMS ~ M1507, 2015 IRC BOOK

(C)~ CARBON MONOXIDE ALARMS R-315 IN ACC. WITH. UL 2034, UL-217

R 315.3 LOCATION ~ OUTSIDE EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BATHROOM

~ POWER SOURCE ~ PRIMARY POWER SOURCE ~ BUILDING WIRING + BATTERY BACK-UP SHALL COMPLY WITH NFPA.

(S)~ SMOKE ALARMS R314, 2015 IRC-BOOK AND IN ACC. WITH NFPA 72

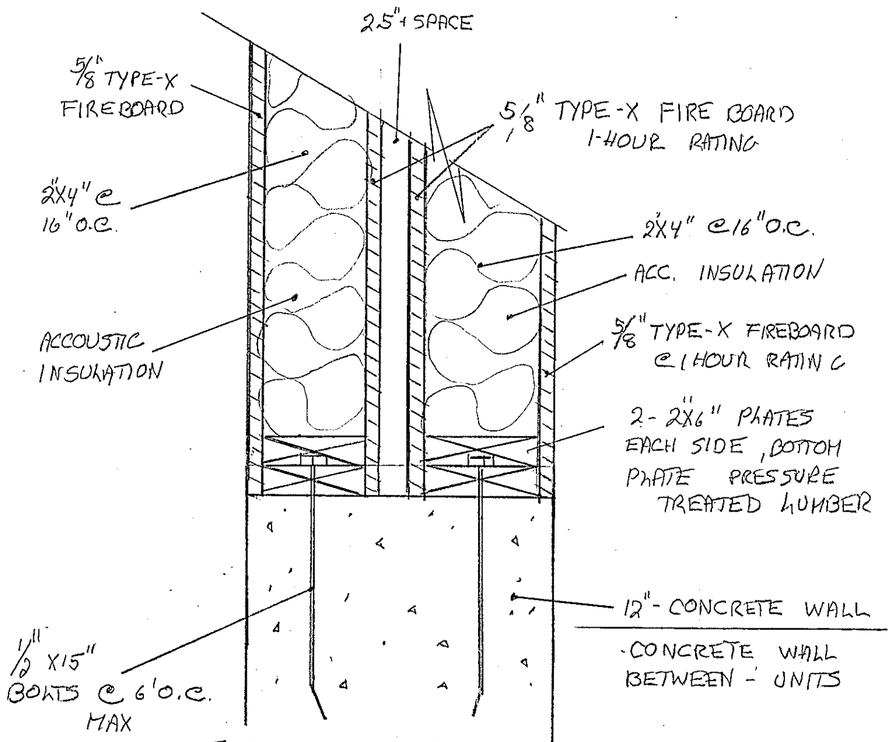
~ PROVIDED FOR DWELLING (NEW) AS INDICATED.
- IN EACH SLEEPING ROOM
- OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS
- ON EACH ADDITIONAL STORY OF DWELLING INCLUDING BASEMENT & HABITABLE ATTIC.

~ SHALL BE INSTALLED NOT LESS THAN 3' FROM THE DOOR OF A BATHROOM

~ SHALL BE INTERCONNECTED WHERE THE ACTUATION OF ONE WILL ACTIVATE ALL.

~ POWER SOURCE ~ PRIMARY BUILDING WIRING WITH BATTERY ~ BACK-UP

TWO-HOUR-FIRE WALL SEPARATION

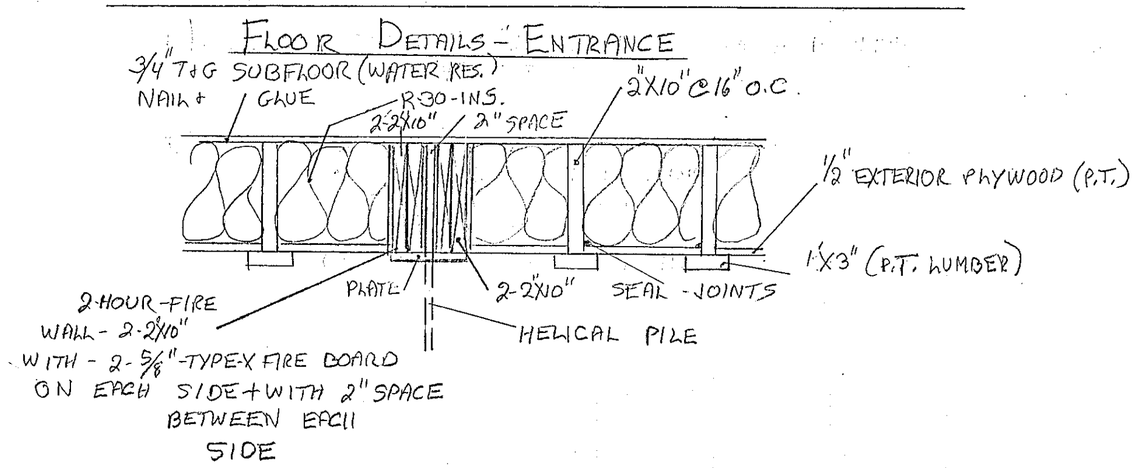


NOTES ~

* ZERO CLEARANCE FIRE PLACE - SEE MANUF. FOR UNIT SIZES, FRAMING DETAILS AND SAFETY AND FIRE CODES.

* WIND BRACING @ 123 M.P.H. BASIC WIND SPEED
50 P.S.F. GROUND SNOW LOAD
MA STATE BUILDING CODE
9TH EDITION

FLOOR DETAILS - ENTRANCE



TOTAL ~ WINDOW SCHEDULE - FOR TWO UNITS							
MK	#	UNIT SIZE	R.O.	HEADER	NT	U.F	NOTES
①	2	33 3/4" X 52 3/4"	34 1/4" X 53 1/4"	3-2"X6"	1	.33	D.H. GARAGE UNITS
②	2	3'-4" X 3'-4"	3'-4 1/2 X 3'-4 1/2"	3-2"X8"	2	.27	KITCHEN - D.H. UNIT (TWO, WIDE)
③	4	3' X 5'	3'-0 1/2" X 5'-0 1/2"	3-2"X6"	2	.27	DOUBLE HUNG
④	6	5'-1" X 7'-4"	5'-1 1/2" X 7'-4 1/2"	3-2"X10"	2	.27	2-COMPOSITE-UNITS, D.H. (EGRESS)
⑤	2	29 3/4" X 48 3/4"	30 1/4 X 49 1/4"	3-2"X6"	1	.27	D.H.
⑥	4	56 3/4" X 37 3/4"	38 1/4" X 57 1/4"	3-2"X6"	2	.27	D.H., EGRESS

ALL ~ UNIT EXCEPT ① TO HAVE U.F. VALUE OF .27 OR BETTER

ALL UNIT DOUBLE HUNG UNITS - BASED ON ANDERSON E-SERIES (70 SERIES)

ALL - EGRESS UNITS - CLEAR OPENING 5.7 SQ. FT, CLEAR OPENING WIDTH OF 20" OR GREATER CLEAR OPENING OF 24" HEIGHT.

HEADER SIZES BASED ON 50 P.S.F. GROUND SNOW LOAD., TABLE R602.7(1) 2015 IRC BOOK

* BASEMENT WINDOW - 3 - EACH SIDE, SIZE + LOCATION TO BE DET. IN FIELD

DOORS DETAILS

~ INTERIOR DOOR SIZES AS MARKED ~ 2'-8" X 6'-8", R.O. 34" X 82 1/2"

~ EXTERIOR DOOR 2'-8" X 6'-8", R.O. 34" X 83 1/2"

~ FRONT ~ " " 3' X 6'-8", R.O. 36" X 83 1/2"

~ BI-FOLD UNITS ADD - ADD 1 1/2" TO WIDTH AND 1 1/2" TO HEIGHT TO R.O. OF INDICATED DOOR OPENING.

~ GARAGE DOOR - 9'W X 7'H. CONCRETE R.O. 9'-6", 2NT L.V.L. HEADER, WIND BRACING PAGE 14

~ FARMER PORCH IF ≥ 30" HEIGHT ADD - RAILING @ 36" HIGHT WITH BALUSTER @ < 4" CLEAR SPACE BETWEEN UNITS

* ~ 12' X 12' DECK DETAILS - FLOOR JOISTS - 2"X10" @ 16" O.C., #2 DOUGLAS FIR. POST, 6"X6" (P.T.H.) SUPPORT FOOTING (DECK) 12" DIA. TUBE TO 4'-B.G. HEADER BEAMS - (4 - 2"X12") # 2, DOUGLAS-FIR., FLOOR BOARD 5/4"X6" P.T.L.
* IF DECK > 30" (HT) ADD RAILING AND BALUSTER @ < 4" CLEAR SPACING + @ 36" HEIGHT.,

SCALE ~ 1/4" = 1'

25'

25'

HIP RAFTER
2-2"X10"

2 5/8" EXT. PLYWOOD
+ RUBBER MEMBRANE
+ SHINGLES

2"X10" @ 16" O.C.

2"X10" @ 16" O.C.

HIP-RAFTER
2-2"X10"

13'

@ 4 PITCH

@ 4 PITCH

@ 4 PITCH

@ 4 PITCH

FLASHING

6 PITCH

6 PITCH

5/8" EXTERIOR PLYWOOD
+ 15 ROOF PAPER
AND 290 WGT SHINGLES

2 HOUR FIRE
WALL SEP.
TO BOTTOM
OF ROOF

13'-6"

RAFTERS
2"X10" @ 12" O.C.
#2 DOUGLAS-FIR

RAFTERS
#2 DOUGLAS-FIR
2"X12" @ 12" O.C.

@ 6 PITCH

@ 6 PITCH

13'-6"

6 PITCH

2"X12" RIDGE BOARD

CONT. RIDGE VENT

@ 6 PITCH

@ 6 PITCH

6
PITCH

2"X12" @ 12" O.C.
#2 DOUGLAS-FIR-L.

TABLE R802.5.1(G) 2015 IRC.
BOOK
@ 50 P.S.F. GROUND SNOW
LOAD AND
10 PS.F DEAD LOAD
L/Δ = 240

2"X12" @ 12" O.C.
#2 DOUGLAS-FIR
RAFTERS

SOLAR READY PROVISION
SEE PAGE 13
FOR DETAILS

12'X12'
PATIO
BELOW

12'X12'
PATIO
BELOW

14'

FLASHING

5 PITCH.
2X6" @
16" O.C.
RAFTERS

5 PITCH
2"X6" @
16" O.C.
RAFTERS

2'

5'

5 PITCH

@ 10 PITCH

@ 10 PITCH

5 PITCH

2"X6" @ 16" O.C.

2"X6" @ 16" O.C.

2"X6" @ 11" O.C.

2"X6" @ 16" O.C.

5'

11'

9'

9'

11'

5'

5'

ROOF DETAILS

ROOF AND RAFTERS

PAGE 11 OF 13

SCALE ~ 1/4" = 1'

CEILING JOISTS TABLE R 802.4(2) 2015 IRC BOOK
2X8" @ 16" O.C. # 2 DOUGLAS FIR @ 20 P.S.F LIVE LOAD
10 PSF DEAD LOAD L/Δ = 240°

50'

25' 25'

13'

41'

28'

2'-9"

5'-6"

5'-9"

2X8" @ 16" O.C. # 2 DOUGLAS FIR

2X8" @ 16" O.C. # 2 DOUGLAS-FIR

#2 DOUGLAS-FIR 2X8" @ 16" O.C.

2X8" @ 16" O.C. # 2 DOUGLAS-FIR

ATTIC ACC. 25½"X54"±

ATTIC ACC. 25½"X 54" ±

2-H FW

F.W.

~ F.W. - 2-HOUR FIRE WALL TO ROOF DETAILS PAGE ~ 13

~ ATTIC ACC. LADDER R.O. 25½"X 54" ±

~ CHECK WITH MANUF FOR SIZE AND RO; ~ + SPECS. OF ATTIC LAD.

13'

6'-9"

4'

6'

2'-9"

5'-6"

5'-9"

41'

5' 20' 20' 5'

50'

CEILING JOIST DETAILS

PAGE 10 OF 13

SCALE ~ 1/4" = 1'

25'

CEILING JOIST OVER GARAGE TABLE R802.4(2) 2015 IRC BOOK, 2"X8" @ 16" O.C., 20 P.S.F. LIVE LOAD, 10 P.S.F. DEAD LOAD L/Δ=240

25'

GARAGE CEILING JOISTS TABLE R802.4(2) 2015 IRC @ 20 P.S.F. LIVE LOAD AND 10 P.S.F. DEAD LOAD, L/Δ=240, 2"X8" @ 16" O.C.

13'-3"

14'-0"

40'-9"

12'-9"

14'-0"

5'

ACC.

ACC.

2"X8" @ 16" O.C. GARAGE CEILING JOISTS

2"X8" @ 16" O.C. GARAGE CEILING JOISTS, #2 D.F.

LVL-C2

2"X10" - FLOOR JOISTS @ 16" O.C.

2"X10" @ 16" O.C. #2 D. FIR.

LVL-C2

2 HR FW

LVL-C1

2ND LEVEL 2"X10" @ 16" O.C. #2. D. FIR

FLOOR JOISTS - 16" O.C.

LVL-C1

2"X10" @ 16" O.C. #2. DOUGLAS FIR.

LVL-C1

42" WIDE FINISHED 12.6' T. RUN

42" WIDE FINISHED WIDTH 12'6" TOTAL RUN

2ND LEVEL FLOOR JOIST 2"X10" @ 16" O.C. #2 DOUGLAS FIR

LVL.

LVL.

CEILOOIRE JOISTS 2"X10" @ 16",

2"X6" CEILING JOISTS @ 16" O.C. (ENTRANCE)

5'

11'

9'

9'

11'

5'

LVL-C1 & C2 TO BE SAME HEIGHT (14'1" ±)
CAL. AT 40 P.S.F. LIVE LOAD AND 10 P.S.F. DEAD LOAD +
* FINISH EXPOSED BEAM BELOW

FLOOR JOIST-TABLE R 502.3.1(2) 2015 IRC. BOOK
2"X10" @ 16" O.C. #2 DOUGLAS FIR @ 40 P.S.F. LIVE LOAD 10 P.S.F DEAD LOAD AND L/Δ = 360°

USE- JOIST HANGERS TO SUPPORT-FLOOR JOIST TO L.V.L. MIN, @ 750 LBS.

2-HOUR-FIREWALL TO ROOF DETAILS - PAGE -13

SECOND LEVEL
FLOOR JOIST DETAILS
PAGE 9 OF 13
SCALE ~ 1/4" = 1'

NOTES - PATIO - 12'X12' - FLOOR JOISTS 2"X10" @ 16" O.C.
BEAM HEADER 4-2"X10", POST (2)-4"X4" ON
HELICAL PILES, FLOOR BOARD 5/4"X6" (P.T.B)
OR COMPOSITE

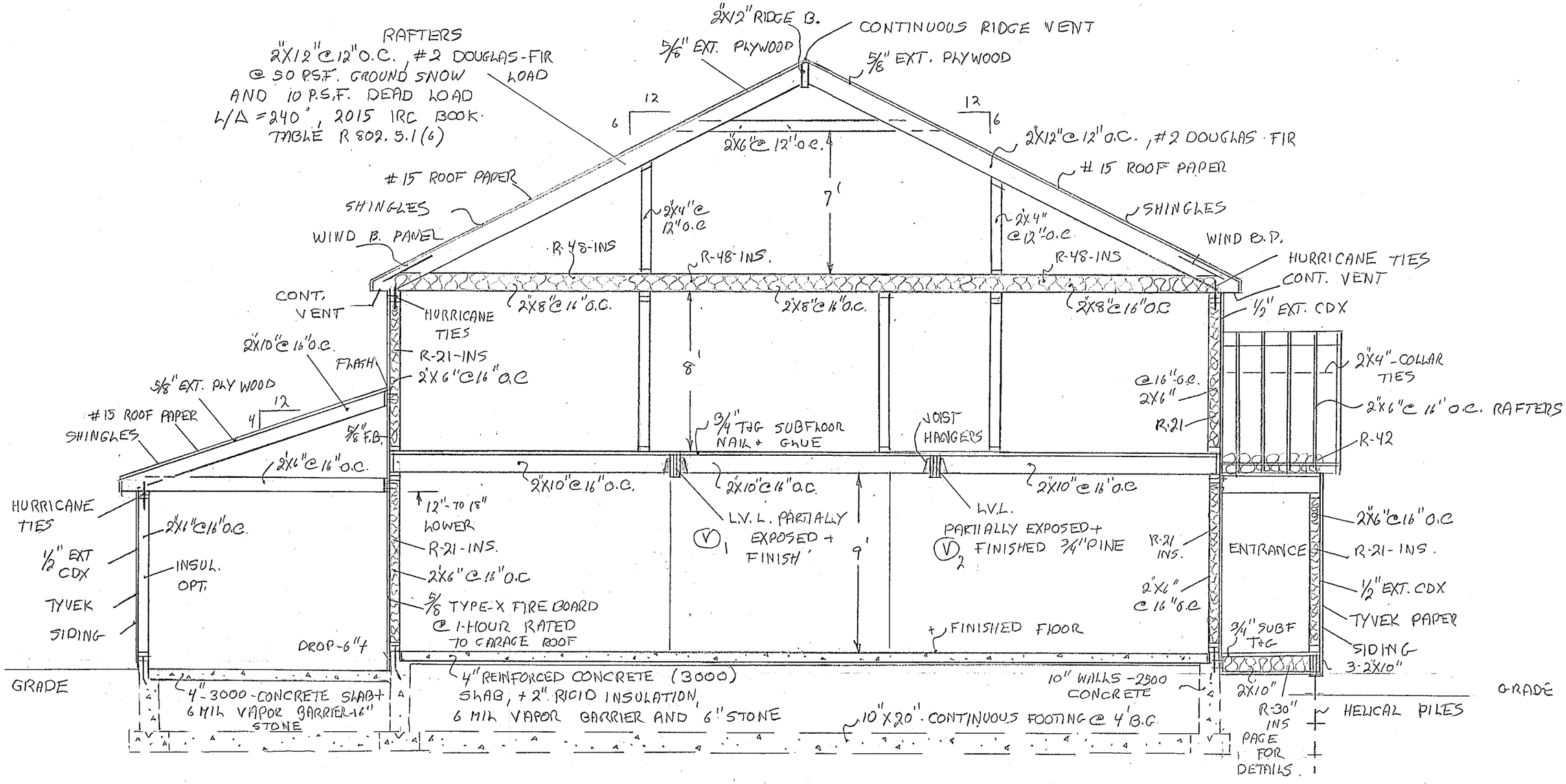
~ FIRE WALL - 2 HOUR SEPARATION BETWEEN UNIT TO ROOF

~ FIRE WALL BETWEEN GARAGE AND LIVING SPACE 1-HOUR SEPARATION

FARMERS PORCH - FLOOR JOISTS 2"X6" @ 16" O.C.
HEADER BEAM 3-2"X10", POSTS 4"X4" ON
HELICAL PILES, FLOOR BOARD 5/4"X6" P.T.L.
OR COMPOSITE MATERIAL

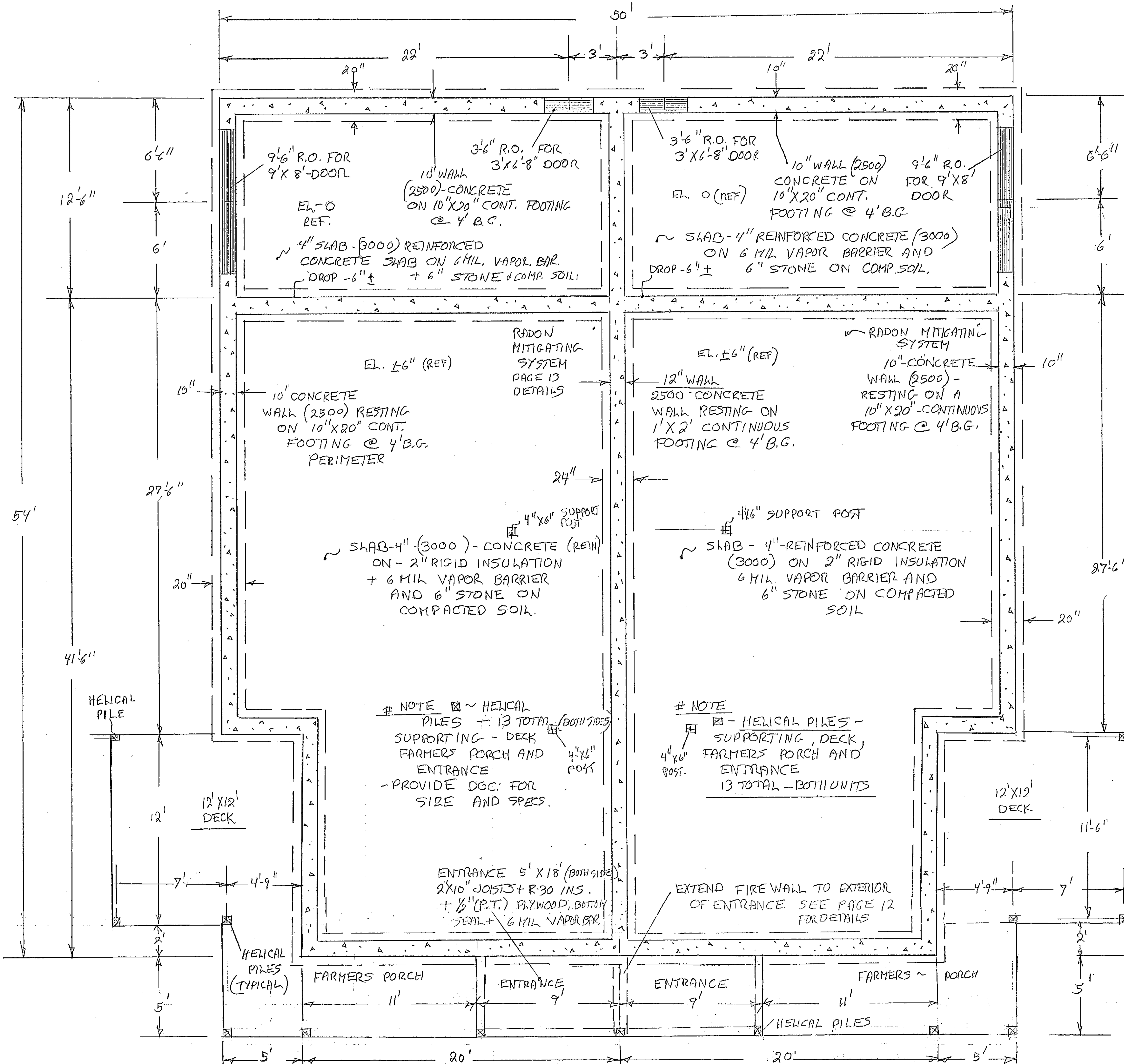
- ROOF CEILING JOISTS 2"X6" @ 16" O.C.
~ RAFTERS 2"X6" @ 16" O.C. @ 5 PITCH
+ 5/8" PLYWOOD + #15 ROOFING PAPER
& SHINGLES,
~ BOTTOM OF ROOF FINISHED 1/2" PLYWOOD

L.V.L. (V1) & (V2) -
@ 40 P.S.F. LIVE LOAD PER LEVEL AND 10 P.S.F. DEAD LOAD
POST SUPPORT 4"X6"



CROSS SECTION - X≈X

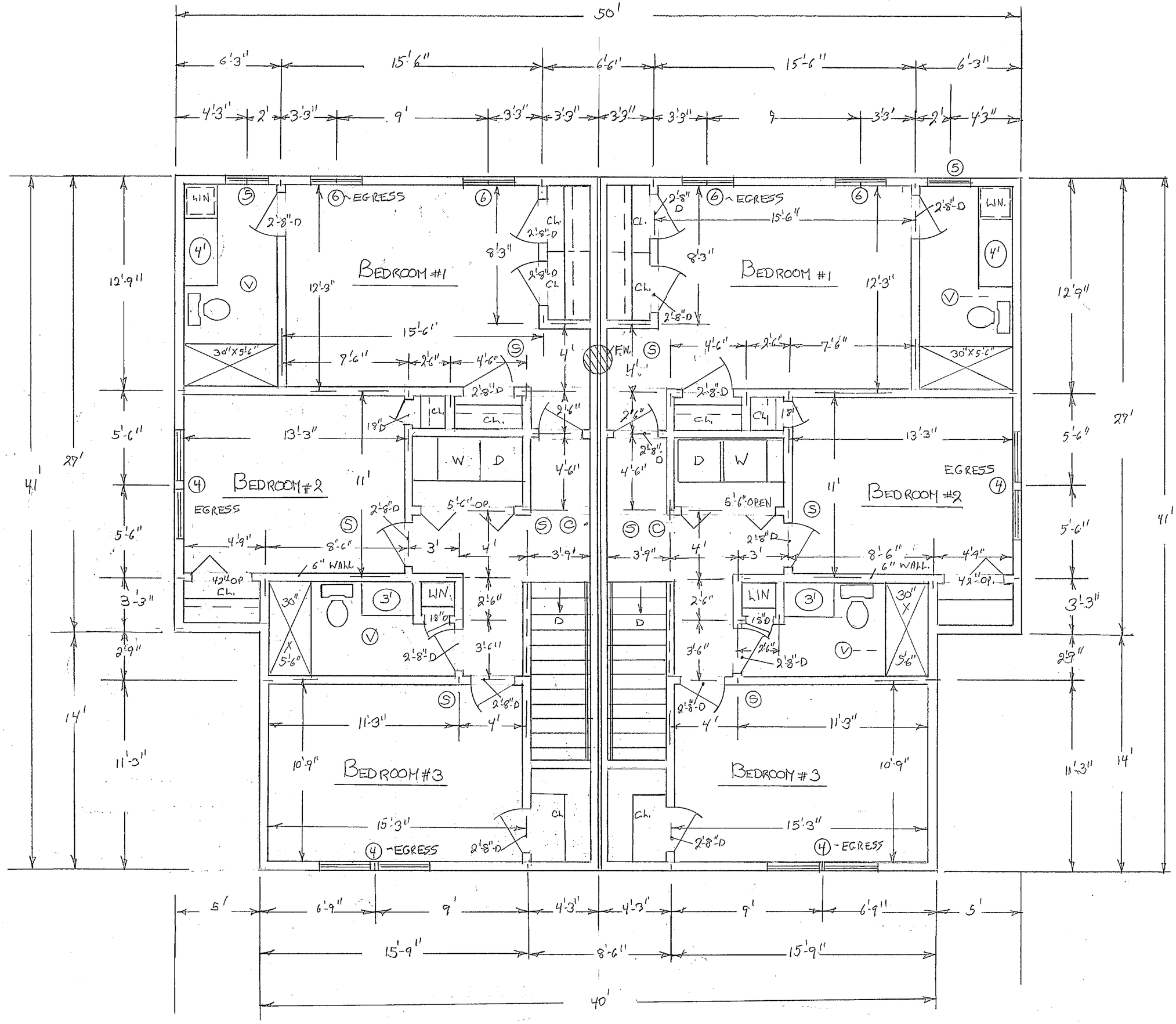
SCALE ~ 1/4" = 1'



FOUNDATION PLAN

PAGE 7 OF 13

SCALE - 1/4" = 1'



SECOND FLOOR PLAN

Ⓥ - VENT OUTSIDE BATHROOM & DRYER

Ⓢ - SMOKE ALARM - R 314

Ⓒ - CARBON ALARM - R-315 MONOXIDE

~ RAIL - DOWN STAIR @ 32" - 34" H.

~ STAIRS TOTAL RISE 118.25"

16" RISERS @ 7.39"

15" TREADS @ 11" X 42"

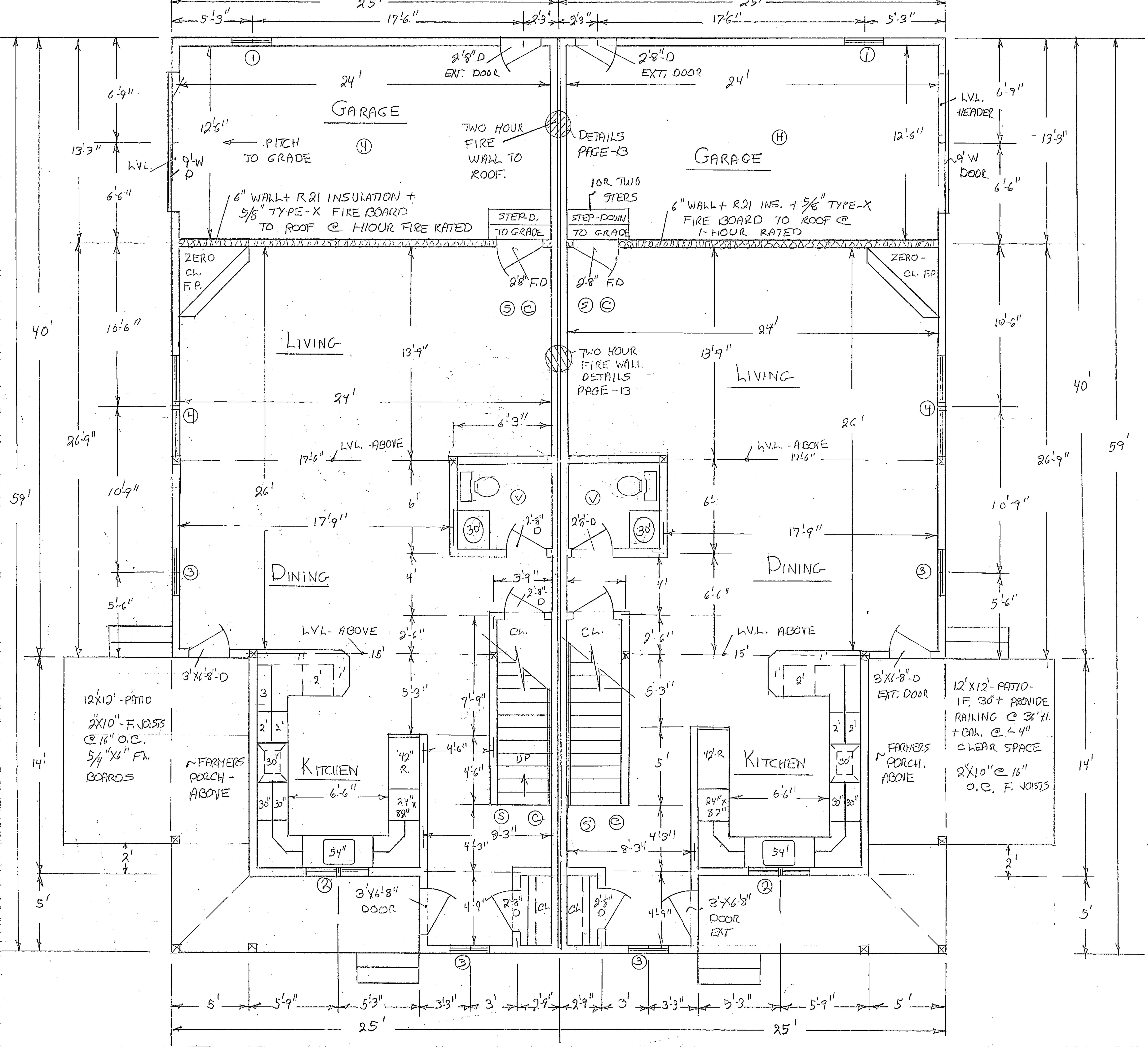
TOTAL ROOM 12.5'

FW. TWO HOUR FIRE-WALL SEPARATION TO ROOF - DETAILS PAGE -13

SECOND FLOOR DETAILS

PAGE 6 OF 13

SCALE ~ 1/4" = 1'



Notes -

- (H) - HEAT ALARM - GARAGE BAY -
- (S) ~ SMOKE ALARM IN ACC. WITH R-314 2015 IRC - BOOK
- (C) - CARBON MONOXIDE ALARM - R 315
- (V) ~ VENT OUTSIDE BATH ROOM, STOVE, AND DRYER DETAILS - PAGE 14 - (ALL ABOVE)

- ~ STAIR TO SECOND LEVEL
- ~ TOTAL RISE 118.25"
- ~ EACH RISER @ 7.39" TOTAL RISERS 16 -
- ~ TREADS ~ 11" DEEP (15) TOTAL RUN - 12.5'

- ~ STAIRS TO BASEMENT TOTAL RISE 106.25"
- RISERS - 14 TOTAL @ 7.59"
- 13 - TREADS @ 11" DEEP TOTAL RUN 10.83'

ZERO CLEARANCE FIREPLACE (OPTIONAL)

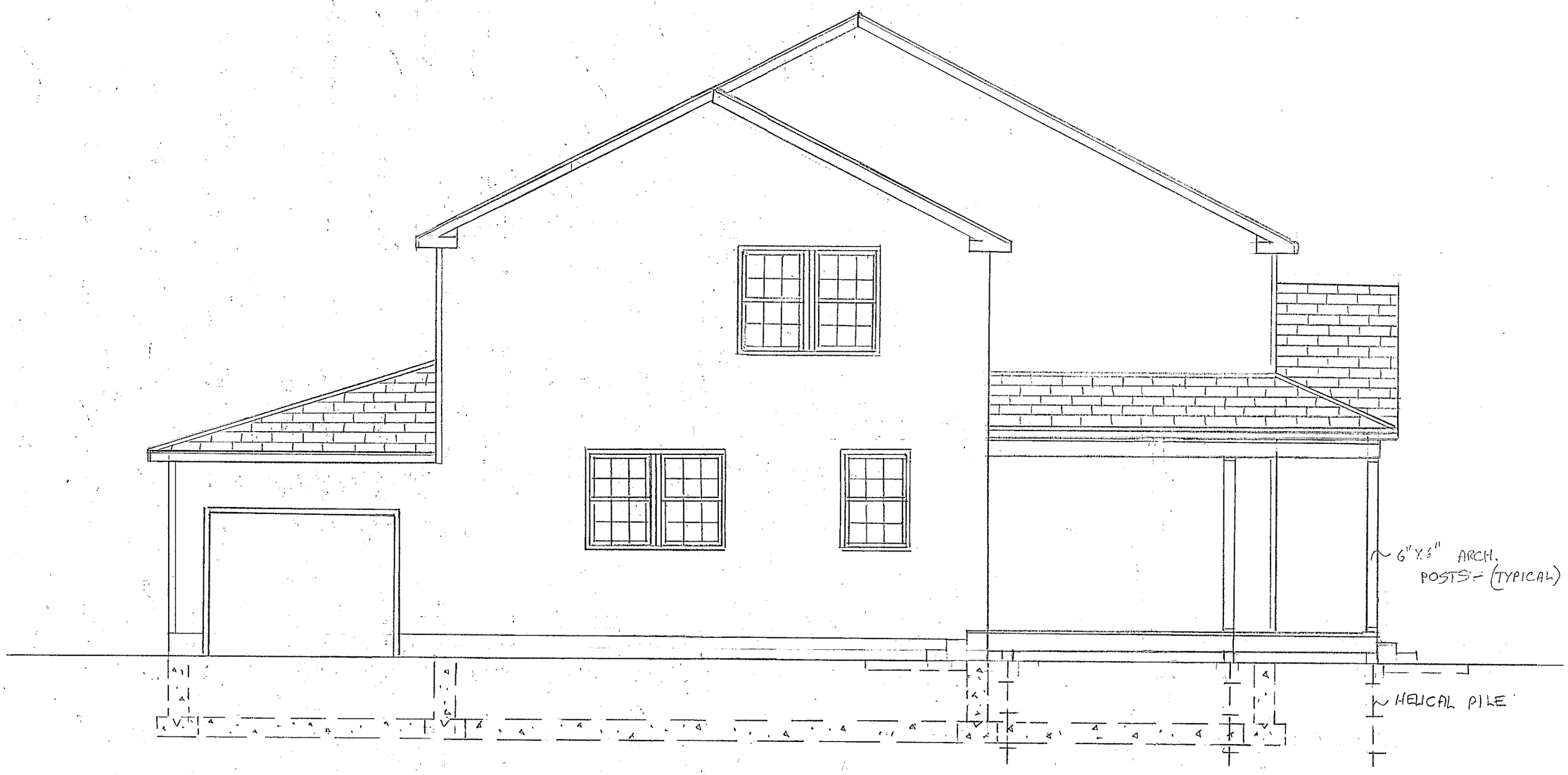
SEE - MANUF. FOR INSTALLATION SPECS., DIM. + RO, PLUS LOCAL SAFETY CODES.

LVL. - CAL. @ 40 P.S.F. LIVE LOAD AND 10 P.S.F., GROUND SNOW LOAD @ 50 P.S.F.

FIRST LEVEL DETAILS

SCALE ~ 1/4" = 1'

WIND BRACING SAME AS PAGE 3 (RIGHT SIDE)



LEFT SIDE VIEW

LEFT SIDE DETAILS

PAGE 4 OF 13

SCALE ~ 1/4" = 1'

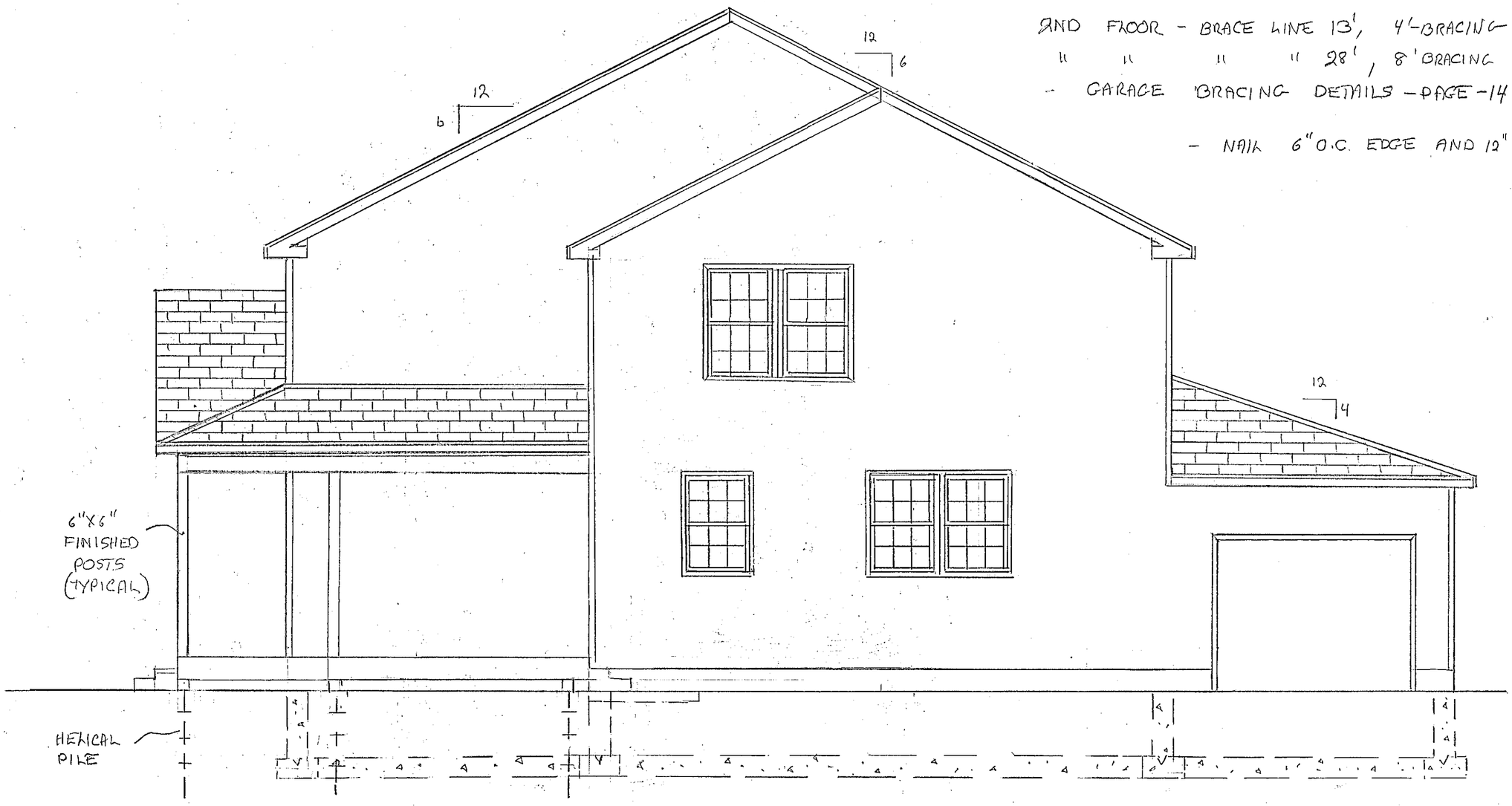
LEFT + RIGHT SIDE ~

WIND BRACING REQUIREMENTS - BASED ON 123 M.P.H.
BASIC W. SPEED - TABLE R602.10.3(1) 2015 IRC BOOK
+ MA STATE CODE BOOK 9TH EDITION

1ST LEVEL - 13' BRACE LINE - 4' BRACING REQUIRED 4'X9' PANEL
" " 28' " " , 12' BRACING " - 3 - 4'X9' "

2ND FLOOR - BRACE LINE 13', 4'-BRACING
" " " " 28', 8' BRACING 2 - 4'X9' PANEL
- GARAGE BRACING DETAILS - PAGE - 14

- NAIL 6" O.C. EDGE AND 12" FIELD



RIGHT SIDE VIEW

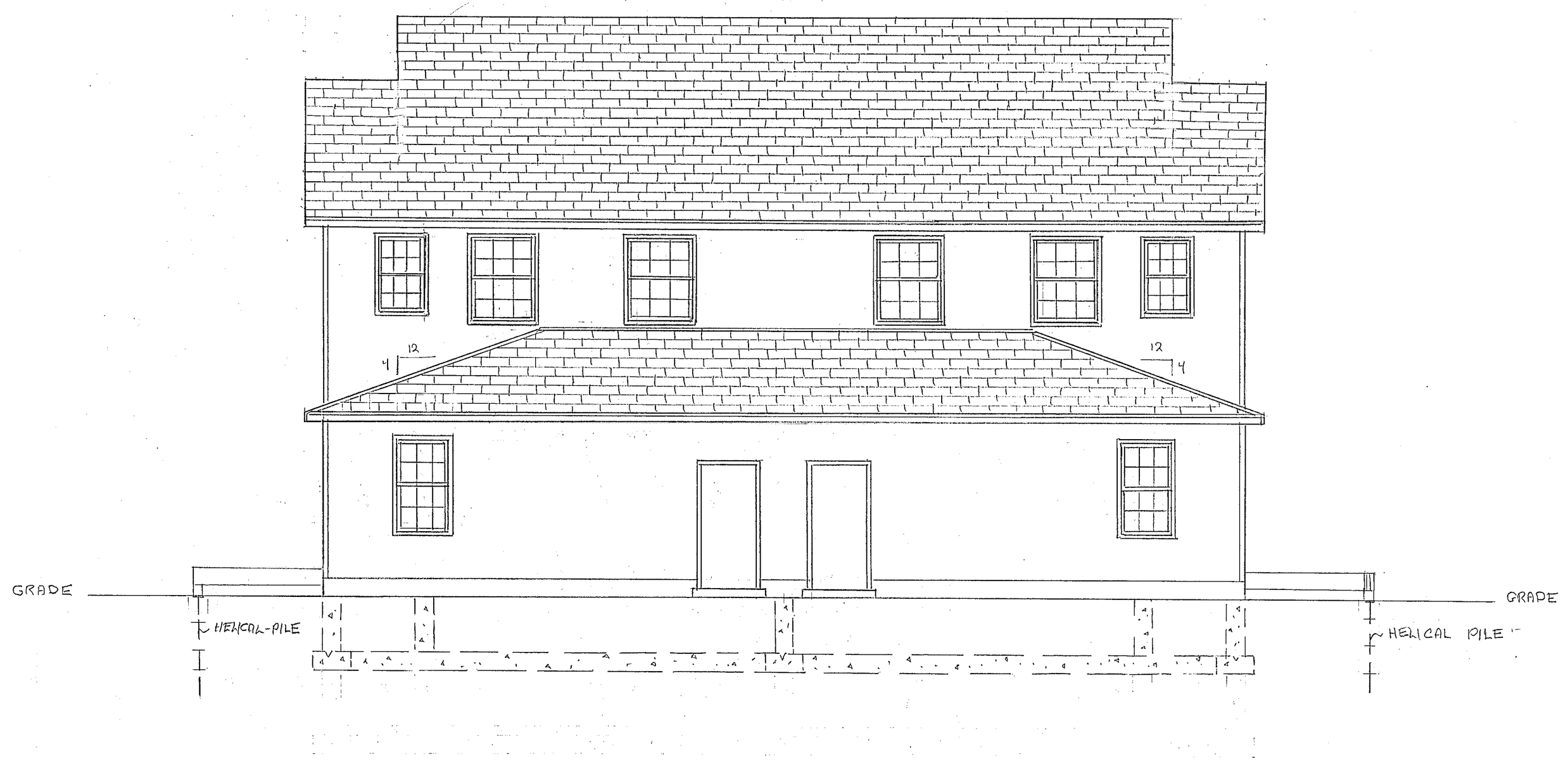
RIGHT SIDE DETAILS

PAGE 3 OF 13

SCALE ~ 1/4" = 1'

WIND BRACING REQUIREMENTS - BASED ON 123 M.P.H. BASIC WIND SPEED
TABLE R602.10.3(1) 2015 IRC. BOOK AND MA STATE CODE BOOK
9TH EDITION - USING THE CS-WSP. METHOD

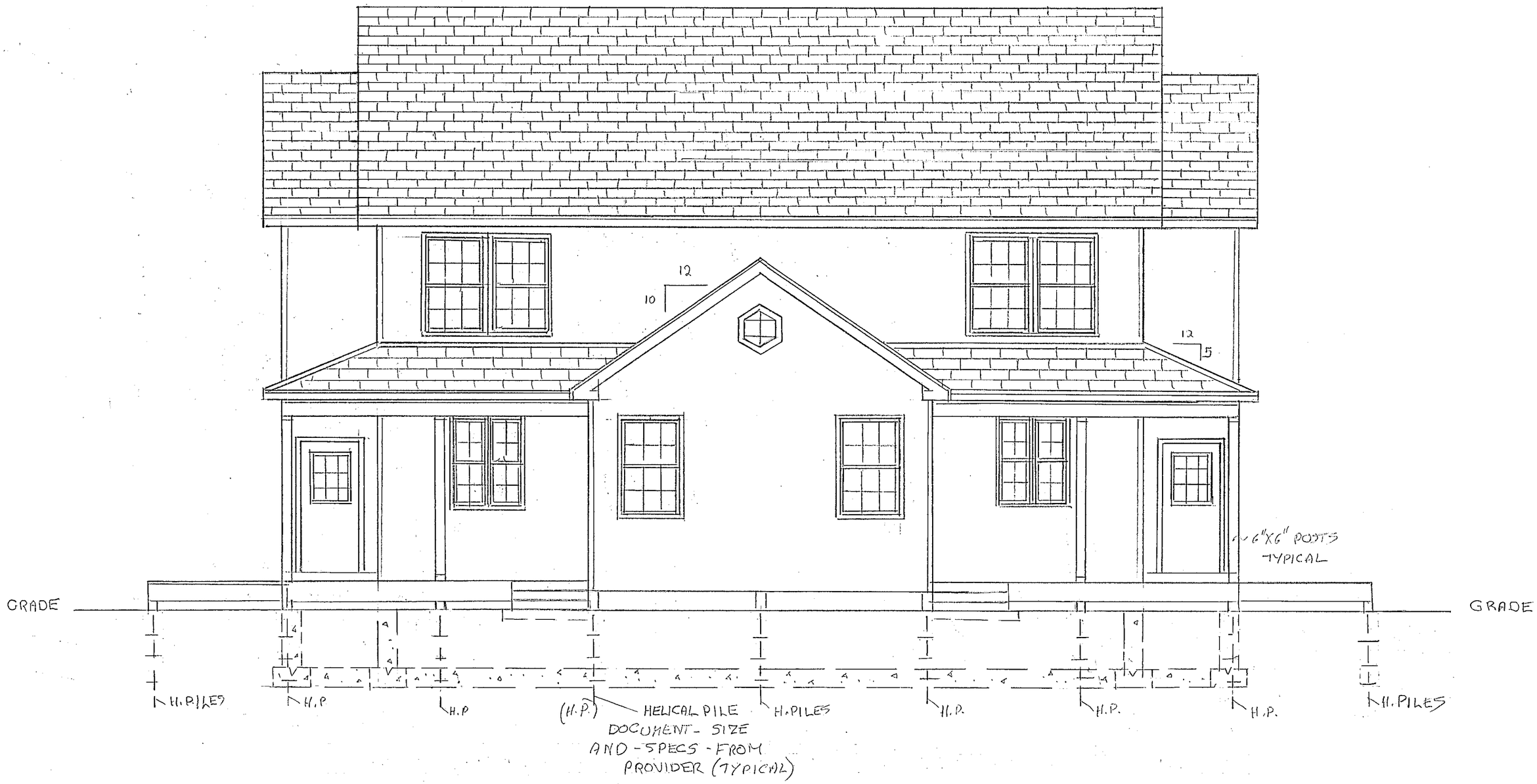
GARAGE BRACE LINE @ 50', 12' BRACING REQUIRED, 3-4'X9' PANELS
SECOND LEVEL 50' BRACE LINE, 10' BRACING REQUIRED, 2-4'X9' & 1-2'X9' PANEL
NAIL 6" O.C. EDGE 12" O.C. FIELD



BACK VIEW

BACK VIEW - DETAILS
PAGE 2 OF 13
SCALE ~ 1/4" = 1'

~WIND BRACING REQUIREMENTS ~ BASED ON 123 M.P.H BASIC WIND SPEED
TABLE - R602.10.3(1) 2015 I.R.C. BOOK AND MA. STATE CODE BOOK
9TH EDITION ~ USING THE CS-W.S.P. METHOD
FIRST LEVEL - BRACE LINE @ 40' - 16' OF BRACING REQUIRED 4 - 4'X10' PANELS
SECOND " " " " " , 8' OF BRACING REQUIRED 2-4'X9' PANEL.



FRONT VIEW

FRONT VIEW DETAILS

PAGE 1 OF 13

SCALE ~ 1/4" = 1'

25 PLEASANT ST.
LEICESTER, MA

DRAWING INDEX

PROJECT INFORMATION				
PROJECT NO:	21-5445			
CULTEC SALES REP:	SALES 203-775-4416 EXT. 204 SALES@CULTEC.COM			
CULTEC PROJECT SUPERVISOR:	DAN GERA 475-289-7064 DGERA@CULTEC.COM			
CULTEC CAD TECH:	GABBY CIOFFI-HENRY 475-289-7112 GHENRY@CULTEC.COM			
COMMENTS:	REVISION	DATE	COMMENT	BY

CULTEC, Inc.
Subsurface Stormwater Management Systems
P.O. Box 280
878 Federal Road
Brookfield, CT 06804
www.cultec.com
PH: (203) 775-4416
PH: (800) 4-CULTEC
FX: (203) 775-1462
tech@cultec.com

NOTE: THESE SHOP DRAWINGS MAY CONTAIN COMPONENTS INCLUDING BUT NOT LIMITED TO MANHOLES, CATCH BASINS, STORM PIPES AND FITTINGS, MANIFOLDS, CASTINGS AND OTHER NECESSARY APPURTENANCES THAT MAY NOT BE SUPPLIED BY CULTEC, INC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SUPPLIER TO CONFIRM WITH CULTEC THE MATERIALS PROVIDED.

BEFORE YOU BEGIN - REQUIRED MATERIALS AND EQUIPMENT

1. PROPER GEOTECHNICAL SOIL EVALUATION BY A QUALIFIED ENGINEER OR SOIL SCIENTIST TO DETERMINE SUITABILITY OF STRUCTURAL INSTALLATION
2. OSHA COMPLIANCE
3. CULTEC WARNING TAPE, OR EQUIVALENT
4. ASSURANCES FROM LOCAL UTILITIES THAT NO UNDERGROUND GAS, ELECTRICAL OR OTHER POTENTIALLY DANGEROUS PIPELINES OR CONDUITS ARE ALREADY BURIED AT THE SITE
5. ACCEPTABLE 1- 2 INCH (25 - 51 mm) WASHED, CRUSHED STONE AS DETAILED IN CULTEC'S INSTALLATION INSTRUCTIONS. CLEANLINESS OF STONE TO BE VERIFIED BY ENGINEER.
6. ACCEPTABLE FILL MATERIAL AS SHOWN IN CULTEC'S INSTALLATION INSTRUCTIONS.
7. ALL CULTEC CHAMBERS AND ACCESSORIES AS SPECIFIED IN THE ENGINEER'S PLANS INCLUDING CULTEC NO. 410 NON-WOVEN GEOTEXTILE, CULTEC STORMFILTER AND CULTEC NO. 4800 WOVEN GEOTEXTILE, WHERE APPLICABLE.
8. RECIPROCATING SAW OR ROUTER
9. STONE BUCKET
10. STONE CONVEYOR AND/OR TRACKED EXCAVATOR
11. TRANSIT OR LASER LEVEL MEASURING DEVICE
12. COMPACTION EQUIPMENT WITH MAXIMUM GROSS VEHICLE WEIGHT OF 12,000 LBS (5,440 KGS). VIBRATORY ROLLERS MAY ONLY BE USED ON THE STONE BASE PRIOR TO THE INSTALLATION OF CHAMBERS.
13. CHECK CULTEC CHAMBERS FOR DAMAGE PRIOR TO INSTALLATION. DO NOT USE DAMAGED CULTEC CHAMBERS, CONTACT YOUR SUPPLIER IMMEDIATELY TO REPORT DAMAGE OR PACKING-LIST DISCREPANCIES.

REQUIREMENTS FOR CULTEC CHAMBER SYSTEM INSTALLATIONS

1. INSTALLING CONTRACTORS ARE EXPECTED TO COMPREHEND AND USE THE MOST CURRENT INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING A SYSTEM INSTALLATION. IF THERE IS ANY QUESTION AS TO WHETHER YOU POSSESS THE MOST CURRENT INSTRUCTIONS, CONTACT CULTEC AT (203) 775-4416 OR VISIT WWW.CULTEC.COM.
2. CONTACT CULTEC AT LEAST THIRTY DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE FOR A PRE-CONSTRUCTION MEETING.
3. ALL CULTEC SYSTEM DESIGNS MUST BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
4. USE CULTEC INSTALLATION INSTRUCTIONS AS A GUIDELINE ONLY FOR MINIMUM/MAXIMUM REQUIREMENTS. ACTUAL DESIGN MAY VARY. REFER TO APPROVED CONSTRUCTION DRAWINGS FOR JOB-SPECIFIC DETAILS. BE SURE TO FOLLOW THE ENGINEER'S DRAWINGS AS YOUR PRIMARY GUIDE.
5. THE FOUNDATION STONE SHALL BE LEVEL AND COMPACTED PRIOR TO CHAMBER INSTALLATION.
6. OVERLAPPING RIB CONNECTIONS OF CHAMBERS SHALL BE FULLY SHOULDERED PRIOR TO STONE PLACEMENT.
7. CENTER-TO-CENTER SPACING SHALL BE CHECKED AND MAINTAINED THROUGHOUT INSTALLATION PROCESS.
8. ANY DISCREPANCIES WITH THE SYSTEM SUB-GRADE SOIL'S BEARING CAPACITY MUST BE REPORTED TO THE DESIGN ENGINEER.
9. NON-WOVEN GEOTEXTILE MUST BE USED AS SPECIFIED IN THE ENGINEER'S DRAWINGS.
10. CULTEC REQUIRES THE CONTRACTOR TO REFER TO CULTEC'S INSTALLATION INSTRUCTIONS CONCERNING VEHICULAR TRAFFIC. RESPONSIBILITY FOR PREVENTING VEHICLES THAT EXCEED CULTEC'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE CHAMBER SYSTEM LIES SOLELY WITH THE CONTRACTOR THROUGHOUT THE ENTIRE SITE CONSTRUCTION PROCESS. THE PLACEMENT OF WARNING TAPE, TEMPORARY FENCING, AND/OR APPROPRIATELY LOCATED SIGNS IS HIGHLY RECOMMENDED. IMPRINTED WARNING TAPE IS AVAILABLE FROM CULTEC. FOR ACCEPTABLE VEHICLE LOAD INFORMATION, REFER TO CULTEC INSTALLATION INSTRUCTIONS.
11. TRAFFIC OF INSTALLATION EQUIPMENT OR OTHER VEHICULAR TRAFFIC OVER TOP OF THE CULTEC STORMWATER SYSTEM IS STRICTLY RESTRICTED AND PROHIBITED UNTIL SATISFACTORY COVER AND COMPACTION IS ACHIEVED ACCORDING TO CULTEC'S MANUFACTURER INSTALLATION INSTRUCTIONS.
12. EROSION AND SEDIMENT-CONTROL MEASURES MUST MEET LOCAL CODES AND THE DESIGN ENGINEER'S SPECIFICATIONS THROUGHOUT THE ENTIRE SITE CONSTRUCTION PROCESS.
13. CULTEC SYSTEMS MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. FAILURE TO DO SO WILL VOID THE LIMITED WARRANTY.
14. CONTACT CULTEC, INC. AT 203-775-4416 WITH ANY QUESTIONS OR FURTHER CLARIFICATION OF REQUIREMENTS.
15. PLACEMENT OF EMBEDMENT STONE MUST BE IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS. STONE COLUMN HEIGHT DEFERENTIAL MUST NEVER EXCEED 12" (305 mm) BETWEEN CHAMBER ROWS, ADJACENT CHAMBERS OR STONE PERIMETER. STONE MUST BE PLACED OVER THE CROWN OF THE CHAMBERS TO ANCHOR THE CHAMBERS IN PLACE AND MAINTAIN ROW SPACING.
16. EMBEDMENT STONE MUST ONLY BE PLACED BY EXCAVATOR OR TELESCOPING CONVEYOR BOOM. PLACEMENT OF EMBEDMENT STONE WITH BULLDOZER IS NOT AN ACCEPTABLE METHOD OF INSTALLATION AND MAY CAUSE DAMAGE TO THE CHAMBERS. ANY CHAMBERS DAMAGED USING AN UNACCEPTABLE METHOD OF BACKFILL ARE NOT COVERED UNDER THE CULTEC LIMITED WARRANTY.

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

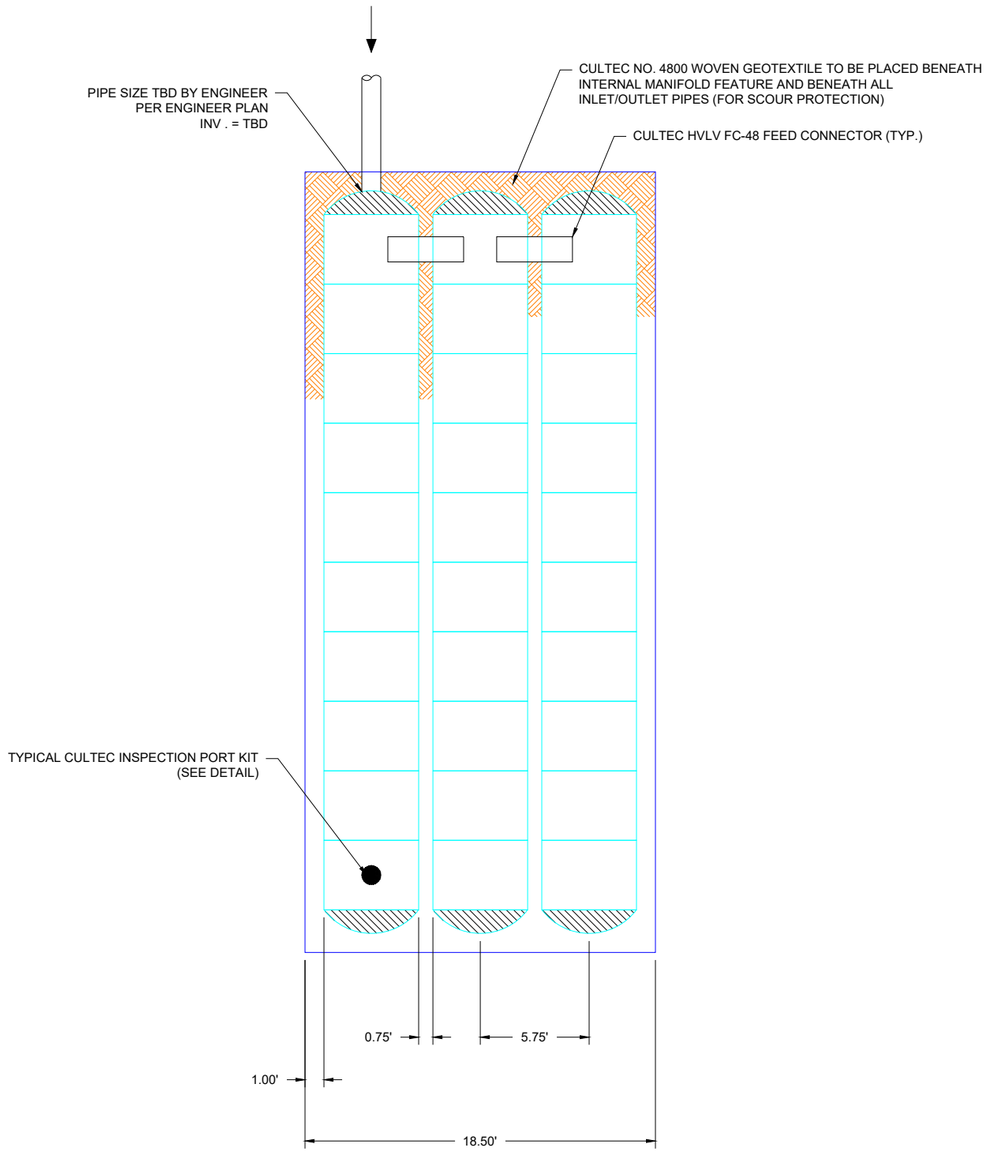
PROPOSED STORMWATER MANAGEMENT SYSTEM ELEVATIONS

(TO BE APPROVED BY ENGINEER OF RECORD)
*ENGINEER OF RECORD TO CONFIRM MINIMUM AND MAXIMUM BURIAL REQUIREMENTS ARE MET)

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT OR UNPAVED)	16.00
MINIMUM ALLOWABLE GRADE (UNPAVED TRAFFIC)	6.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	5.50
MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)	5.50
TOP OF STONE ELEVATION	4.50
TOP OF CHAMBER ELEVATION	4.00
INLET PIPE INVERT	TBD
BOTTOM OF CHAMBER ELEVATION	1.00
BOTTOM OF STONE ELEVATION	0.50

CULTEC STORMWATER MANAGEMENT SYSTEM SUMMARY

TOTAL STORAGE REQUIRED (CF)	1,737
TOTAL STORAGE PROVIDED (CF)	1,905
% STONE POROSITY	40
SYSTEM AREA (SF)	762.20
DEPTH OF EMBEDMENT STONE (IN)	6
DEPTH OF BEDDING STONE (IN)	6
STONE PERIMETER (IN)	12
SPACING BETWEEN CHAMBER ROWS (IN)	9



1 SYSTEM LAYOUT DETAIL
NTS

NOTE: ALL EXTERNAL SYSTEM STRUCTURES, INLET/OUTLET PIPES AND PROPOSED ELEVATIONS MUST BE DESIGNED AND APPROVED BY THE ENGINEER OF RECORD. ALL PROPOSED SYSTEM ELEVATIONS PROVIDED MUST BE VERIFIED BY THE ENGINEER OF RECORD AND THE ENGINEER OF RECORD MUST ENSURE CHAMBER BURIAL REQUIREMENTS ARE MET

MATERIALS LIST SUPPLIED BY CULTEC		
CULTEC RECHARGER 360HD CHAMBER	30	PIECES
CULTEC RECHARGER 360HD END CAP	6	PIECES
CULTEC HVLV FC-48 FEED CONNECTORS	2	PIECES
CULTEC NO. 410 NON-WOVEN GEOTEXTILE	278	SQ. YARDS
CULTEC NO. 4800 WOVEN GEOTEXTILE	26	LINEAL FEET
CULTEC INSPECTION PORT KIT	1	PIECES
MATERIALS LIST NOT SUPPLIED BY CULTEC		
1-2 INCH WASHED, CRUSHED STONE	71	CUBIC YARDS
8 OZ. NON-WOVEN GEOTEXTILE	N/A	SQ. YARDS
30 MIL. PVC THERMOPLASTIC LINER	N/A	SQ. YARDS

CULTEC RECHARGER® 360HD LEGEND

- CULTEC RECHARGER 360HD CHAMBER
- CULTEC RECHARGER 360HD END CAP
- CULTEC HVLV FC-48 FEED CONNECTORS
- CULTEC SEPARATOR ROW
- CULTEC NO. 4800 WOVEN GEOTEXTILE
- STONE BORDER

CULTEC STORMWATER CHAMBER

DATE:	10/1/2021
CHECKED BY:	JG
SHEET NO:	2 OF 5
PROJECT NO:	21-5445.00
DESIGNED BY:	GCH
SCALE:	N.T.S.

25 PLEASANT ST.

LEICESTER, MA

SYSTEM LAYOUT SHEET

CULTEC, Inc.
Subsurface Stormwater Management Systems
P.O. Box 280
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FX: (203) 775-1462
tech@cultec.com

1.02

CULTEC Recharger 360HD Stormwater System Calculations

Consulting Engineer:

Project Information:
Pleasant St.
Leicester, MA

Calculations Performed By:
Gabrielle Cioffi-Henry
Cultec, Inc.
878 Federal Rd.
Brookfield, CT 06804
PH: 203-775-4416
FX: 203-775-5887

Date: 10/1/21

Project Number: 21-5445.00

System Information

Proposed bed layout of	3	Rows	10	No. of Units per Row

Given:

Storage required	1737	CF	49.19 m^3
No. 4800 Fabric For Internal/External Manifolds	11.75	feet	
Number of Inlet/Outlet Pipes	1		
Stone **Base**	6	inches	152 mm
Stone **Above**	6	inches	152 mm
Chamber Spacing	9	inches	229 mm
No. of HVLV FC-48 Feed Connectors	2	units	
No. CULTEC Inspection Ports	1	units	
Stone Porosity	40	%	
Stone Border Width	1	feet	0.305 m
Other Parameters:			
Length of Separator Row		feet	0.000 m
Type of Lining	None		
☐ Sand Filter Depth (If Applicable)		feet	0.000 m
☐ Slopped Sides (1:1) (If Applicable)			

☐ Discount stone base from Total storage provided (If Applicable)
☐ Discount stone above from Total storage provided (If Applicable)

Maximum Finished Grade Elevation:	15.00
Minimum Finished Grade Elevation (Unpaved):	5.00
Minimum Finished Grade Elevation (Base of Flexible Pavement):	4.50
Minimum Finished Grade Elevation (Top of Rigid Pavement):	4.50
Top of Stone Elevation:	3.50
Top of Chamber Elevation:	3.00
Bottom of Chamber Elevation:	0.00
Bottom of Stone Elevation:	-0.50

Assumptions

Model Name		Chamber Height (inches / mm)	Design Unit Height (feet / m)	Chamber Width (inches / mm)	Chamber Spacing (inches / mm)	Design Unit Width (feet / m)	Chamber Volume per Linear Foot (cu. ft/ft / cu. m/m)	Design Unit Volume (cu. ft/ft / cu. m/m)	Installed Chamber Length (feet / m)
Recharger® 360HD Chamber	English	36	4.000	60	9	5.75	10.00	15.199	3.670
	Metric	914	1.219	1524	229	1.75	0.929	1.412	1.119
Recharger® 360HD End Cap	English	36.5	4.000	60	9	5.75	5.168	12.301	1.250
	Metric	927	1.219	1524	229	1.75	0.480	1.143	0.381
HVLV™ FC-48 Feed Connectors	English	12	n/a	16	n/a	n/a	0.913	n/a	0.750
	Metric	305	n/a	406	n/a	n/a	0.085	n/a	0.229

Storage Provided within CULTEC Recharger 360HD Stormwater Chamber, End Caps and HVLV FC-48 Feed Connector Internal Manifold System - *not including stone*

Number of Recharger 360HD chambers by design				=	30 pcs	
	30	pcs x	3.670	=	110.10 feet	33.56 m
Number of Recharger 360HD end caps				=	6 pcs	
	6	pcs x	1.250	=	7.50 feet	2.29 m
Number of HVLV FC-48 Feed Connectors				=	2 pcs	
	2	pcs x	0.750	=	1.50 feet	0.46 m
Total footage of Recharger 360HD chambers				=	110.10 feet	33.56 m
Total footage of Recharger 360HD end caps				=	7.50 feet	
Total footage of HVLV FC-48 Feed Connectors				=	1.50 feet	0.46 m
Storage provided within Recharger 360HD chambers				=	1100.72 CF	31.17 m^3
Storage provided within Recharger 360HD end caps					38.76 CF	1.10 m^3
Storage provided within HVLV FC-48 Feed Connectors				=	1.37 CF	0.04 m^3
Total Storage within chambers and feed connectors				=	**1140.85 CF**	**32.31 m^3**

Storage Provided within Entire CULTEC Stormwater System - *including stone*

Bed width	18.50 feet	5.64 m
Bed length	41.20 feet	12.56 m
Bed Depth	4.00 feet	1.22 m
Total Area	762.20 sq. ft.	70.81 m^2
Volume of Effective Excavation *(not including additional cover)*	3048.80 CF	86.34 m^3
Perimeter of Bed	119.40 feet	36.39 m
Total Storage within CULTEC Recharger 360HD chambers, end caps and feed connectors	1140.85 CF	32.31 m^3
Total Stone Required	1907.95 CF	54.03 m^3
	71 CY	
	99 tons	
Storage provided within stone	763.18 CF	21.61 m^3
Total Storage within CULTEC Stormwater System =	**1905 CF**	**53.94 m^3**

Req. storage attained.

CULTEC MATERIALS LIST

Model	Model #	Quantity	Unit of Measure	Quantity	Unit of Measure
Recharger 360HD Heavy Duty Chamber	360HD	30	pcs		
Recharger 360HD End Cap	360HD EC	6	pcs		
HVLV FC-48 Feed Connectors	FC-48	2	pcs		
CULTEC No. 410 Non-Woven Geotextile	NWG410	278	Sq. Yards	232	m2
CULTEC No. 4800 Woven Geotextile 7.5' x 100' (2.29 m x 30.48 m)	75WG4800	26	feet	8	m
CULTEC Inspection Port Kit	INSP KIT 126	1	pcs		
Total Stone		71	cubic yards	54	m^3

☐ DISCLAIMER: If this is a value-engineered project based on a competitor's design.
The following inputs and calculations are based upon limited design information provided to CULTEC by a third-party. An engineer should review the inputs to confirm accuracy of the assumptions.

SYSTEM STORAGE CALCULATION

CULTEC Recharger 360HD Stormwater Incremental Storage

Date: October 1, 2021

Project Information
Pleasant St.
Leicester, MA

Project Number
21-5445.00

Base of Stone Elevation- -0.50

Recharger 360HD Incremental Storage Volumes

Height of System (in)	Height of System (mm)	End Cap Volume (ft^3)	End Cap Volume (m^3)	Chamber Volume (ft^3)	Chamber Volume (m^3)	HVLV FC-48 Feed Connector Volume (ft^3)	HVLV FC-48 Feed Connector Volume (m^3)	Stone Volume (ft^3)	Stone Volume (m^3)	Cumulative Storage Volume (ft^3)	Cumulative Storage Volume (m^3)	Total Cumulative Storage Volume (ft^3)	Total Cumulative Storage Volume (m^3)	Elevation (ft)	Elevation (m)	
48.00	1219	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1904.03	53.92	3.50	0.72	Top of Stone Elevation
47.00	1194	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1878.63	53.20	3.42	0.69	
46.00	1168	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1853.22	52.48	3.33	0.67	
45.00	1143	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1827.81	51.76	3.25	0.64	
44.00	1118	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1802.41	51.04	3.17	0.62	
43.00	1092	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	1777.00	50.32	3.08	0.59	
42.00	1067	0.06	0.00	2.41	0.07	0.00	0.00	24.42	0.69	26.89	0.76	1751.59	49.60	3.00	0.57	Top of Chamber Elevation
41.00	1041	0.12	0.00	5.11	0.14	0.00	0.00	23.32	0.66	28.54	0.81	1724.71	48.84	2.92	0.54	
40.00	1016	0.18	0.01	7.59	0.22	0.00	0.00	22.30	0.63	30.07	0.85	1696.16	48.03	2.83	0.52	
39.00	991	0.24	0.01	12.86	0.36	0.00	0.00	20.17	0.57	33.27	0.94	1666.09	47.18	2.75	0.49	
38.00	965	0.30	0.01	16.24	0.46	0.00	0.00	18.79	0.53	35.33	1.00	1632.82	46.24	2.67	0.47	
37.00	940	0.36	0.01	18.78	0.53	0.00	0.00	17.75	0.50	36.89	1.04	1597.49	45.24	2.58	0.44	
36.00	914	0.42	0.01	20.88	0.59	0.00	0.00	16.89	0.48	38.19	1.08	1560.60	44.19	2.50	0.41	
35.00	889	0.48	0.01	22.70	0.64	0.00	0.00	16.13	0.46	39.32	1.11	1522.41	43.11	2.42	0.39	
34.00	864	0.54	0.02	24.31	0.69	0.00	0.00	15.47	0.44	40.32	1.14	1483.09	42.00	2.33	0.36	
33.00	838	0.60	0.02	25.76	0.73	0.00	0.00	14.86	0.42	41.22	1.17	1442.78	40.85	2.25	0.34	
32.00	813	0.66	0.02	27.07	0.77	0.00	0.00	14.31	0.41	42.04	1.19	1401.55	39.69	2.17	0.31	
31.00	787	0.72	0.02	28.26	0.80	0.00	0.00	13.81	0.39	42.80	1.21	1359.51	38.50	2.08	0.29	
30.00	762	0.84	0.02	29.36	0.83	0.00	0.00	13.33	0.38	43.53	1.23	1316.71	37.29	2.00	0.26	
29.00	737	0.90	0.03	30.38	0.86	0.00	0.00	12.90	0.37	44.17	1.25	1273.18	36.05	1.92	0.24	
28.00	711	0.96	0.03	31.32	0.89	0.00	0.00	12.50	0.35	44.77	1.27	1229.01	34.80	1.83	0.21	
27.00	686	1.02	0.03	32.19	0.91	0.00	0.00	12.12	0.34	45.33	1.28	1184.24	33.53	1.75	0.19	
26.00	660	1.08	0.03	33.01	0.93	0.00	0.00	11.77	0.33	45.86	1.30	1138.91	32.25	1.67	0.16	
25.00	635	1.14	0.03	33.77	0.96	0.00	0.00	11.44	0.32	46.35	1.31	1093.05	30.95	1.58	0.14	
24.00	610	1.20	0.03	34.49	0.98	0.00	0.00	11.13	0.32	46.82	1.33	1046.69	29.64	1.50	0.11	
23.00	584	1.20	0.03	35.17	1.00	0.00	0.00	10.86	0.31	47.23	1.34	999.87	28.31	1.42	0.08	
22.00	559	1.26	0.04	35.80	1.01	0.00	0.00	10.58	0.30	47.65	1.35	952.65	26.98	1.33	0.06	
21.00	533	1.32	0.04	36.41	1.03	0.00	0.00	10.32	0.29	48.04	1.36	905.00	25.63	1.25	0.03	
20.00	508	1.38	0.04	36.98	1.05	0.00	0.00	10.06	0.28	48.42	1.37	856.96	24.27	1.17	0.01	
19.00	483	1.44	0.04	37.51	1.06	0.00	0.00	9.83	0.28	48.78	1.38	808.54	22.90	1.08	-0.02	
18.00	457	1.44	0.04	38.01	1.08	0.01	0.00	9.62	0.27	49.08	1.39	759.76	21.51	1.00	-0.04	
17.00	432	1.50	0.04	38.49	1.09	0.05	0.00	9.39	0.27	49.43	1.40	710.68	20.12	0.92	-0.07	
16.00	406	1.56	0.04	38.94	1.10	0.09	0.00	9.17	0.26	49.76	1.41	661.25	18.72	0.83	-0.09	
15.00	381	1.56	0.04	39.37	1.11	0.11	0.00	8.99	0.25	50.03	1.42	611.49	17.32	0.75	-0.12	
14.00	356	1.62	0.05	39.77	1.13	0.12	0.00	8.80	0.25	50.31	1.42	561.46	15.90	0.67	-0.14	
13.00	330	1.68	0.05	40.15	1.14	0.13	0.00	8.63	0.24	50.58	1.43	511.14	14.47	0.58	-0.17	
12.00	305	1.74	0.05	40.50	1.15	0.13	0.00	8.46	0.24	50.83	1.44	460.56	13.04	0.50	-0.20	
11.00	279	1.74	0.05	40.84	1.16	0.14	0.00	8.32	0.24	51.04	1.45	409.73	11.60	0.42	-0.22	
10.00	254	1.80	0.05	41.15	1.17	0.14	0.00	8.17	0.23	51.26	1.45	358.70	10.16	0.33	-0.25	
9.00	229	1.80	0.05	41.44	1.17	0.15	0.00	8.05	0.23	51.44	1.46	307.43	8.71	0.25	-0.27	
8.00	203	1.86	0.05	41.72	1.18	0.15	0.00	7.91	0.22	51.65	1.46	255.99	7.25	0.17	-0.30	
7.00	178	2.04	0.06	41.97	1.19	0.16	0.00	7.74	0.22	51.91	1.47	204.35	5.79	0.08	-0.32	
6.00	152	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	152.44	4.32	0.00	-0.35	Bottom of Chamber Elevation
5.00	127	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	127.03	3.60	-0.08	-0.37	
4.00	102	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	101.63	2.88	-0.17	-0.40	
3.00	76	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	76.22	2.16	-0.25	-0.42	
2.00	51	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	50.81	1.44	-0.33	-0.45	
1.00	25	0.00	0.00	0.00	0.00	0.00	0.00	25.41	0.72	25.41	0.72	25.41	0.72	-0.42	-0.47	
0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.50	-0.50	Bottom of Stone Elevation

SYSTEM STAGE-STORAGE TABLE

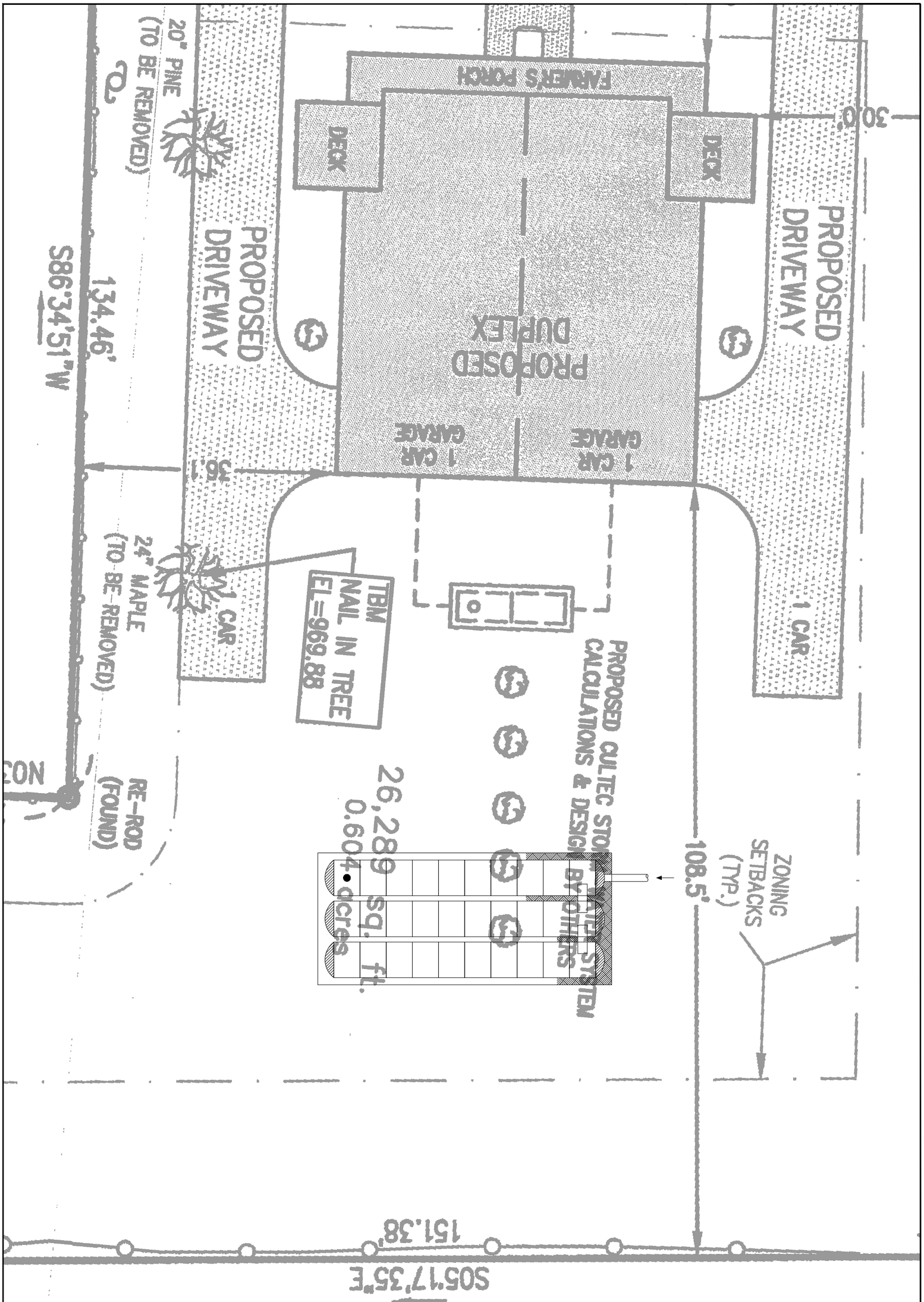
CULTEC STORMWATER CHAMBER

PROJECT NO:	21-5445.00	DATE:	10/1/2021
DESIGNED BY:	GCH	CHECKED BY:	JG
SCALE:	N.T.S.	SHEET NO:	3 OF 5

25 PLEASANT ST.
LEICESTER, MA
SYSTEM CALCULATION SHEET

CULTEC, Inc.
Subsurface Stormwater Management Systems
P.O. Box 280
878 Federal Road
Brookfield, CT 06804
www.cultec.com
PH: (203) 775-4416
PH: (800) 4-CULTEC
FX: (203) 775-1462
tech@cultec.com

1.02



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878 Federal Road PH: (800) 4-CULTEC
Brookfield, CT 06804 FX: (203) 775-1462
www.cultec.com tech@cultec.com

25 PLEASANT ST.

LEICESTER, MA

SYSTEM OVERLAY SHEET

CULTEC STORMWATER CHAMBER

PROJECT NO:	21-5445.00	**DATE:**	10/1/2021
DESIGNED BY:	GCH	**CHECKED BY:**	JG
SCALE:	N.T.S.	**SHEET NO:**	4 OF 5

CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS

GENERAL
CULTEC RECHARGER® 360HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS
1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS.
3. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND THE AASHTO DESIGN TRUCK LOAD AND LIVE AND DEAD LOAD FACTORS AS DEFINED BY AASHTO LRFD SECTION 12.12 WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
4. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
5. THE CHAMBER SHALL BE ARCHED IN SHAPE.
6. THE CHAMBER SHALL BE OPEN-BOTTOMED.
7. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
8. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 36 INCHES (915 mm) TALL, 60 INCHES (1525 mm) WIDE AND 50 INCHES (1275 mm) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 360HD SHALL BE 3.67 FEET (1.12 m).
9. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
10. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCH (250mm) HDPE OR 12 INCH (300mm) PVC.
11. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
12. THE NOMINAL STORAGE VOLUME OF THE RECHARGER® 360HD CHAMBER SHALL BE 10.0 FT^3 / FT (.928 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER® 360HD SHALL BE 36.66 FT^3 / UNIT (1.038 m^3 / UNIT) - WITHOUT STONE.
13. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
14. THE RECHARGER® 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
15. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
16. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 m).

END CAP PARAMETERS
1. THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
4. THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
5. THE END CAP SHALL BE ARCHED IN SHAPE.
6. THE END CAP SHALL BE OPEN-BOTTOMED.
7. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
8. THE END CAP SHALL HAVE 5 CORRUGATIONS.
9. THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 36.5 INCHES (927 mm) TALL, 60 INCHES (1525 mm) WIDE AND 18 INCHES (458 mm) LONG. WHEN JOINED WITH A RECHARGER 360HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 15 INCHES (381 mm).
10. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT^3 / FT (0.48 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 6.46 FT^3 / UNIT (0.183 m^3 / UNIT) - WITHOUT STONE.
11. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750 mm) SMOOTH-WALL PVC.
12. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES
13. THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL
CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 360HD STORMWATER CHAMBERS.

FEED CONNECTOR PARAMETERS
1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT^3 / FT (0.085 m^3 / m) - WITHOUT STONE.
7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

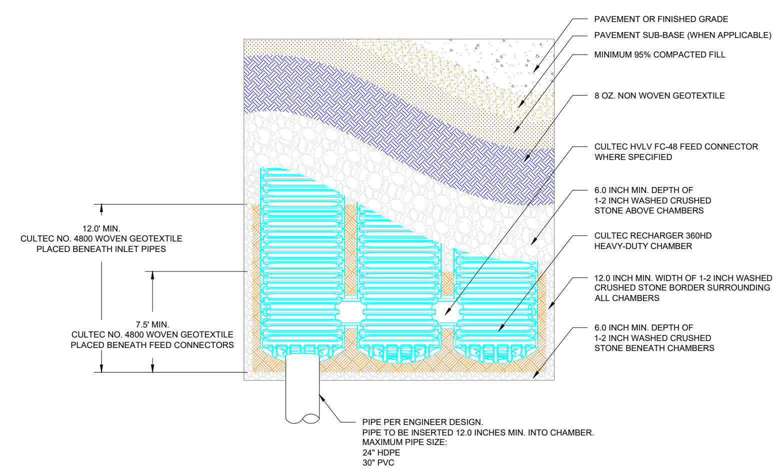
CULTEC NO. 410™ NON-WOVEN GEOTEXTILE
CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

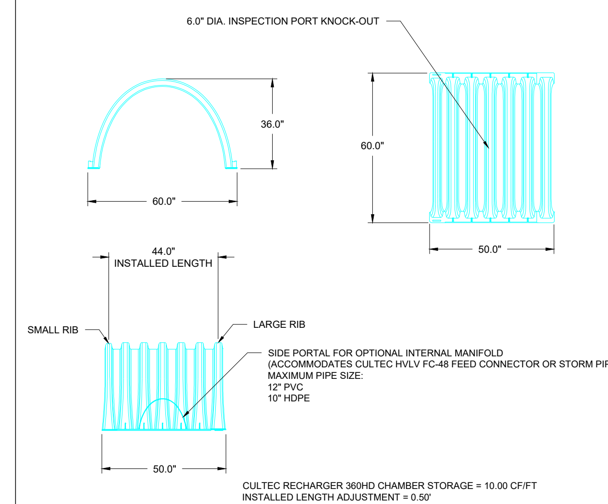
CULTEC NO. 4800™ WOVEN GEOTEXTILE
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD.
14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

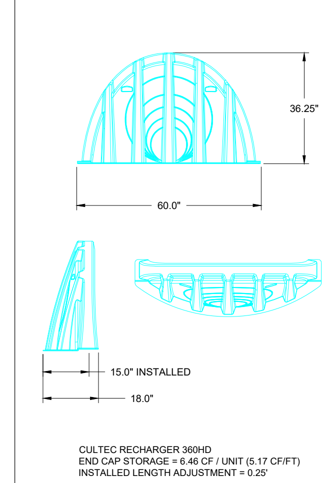
360HD 1.0 **GENERAL NOTES**



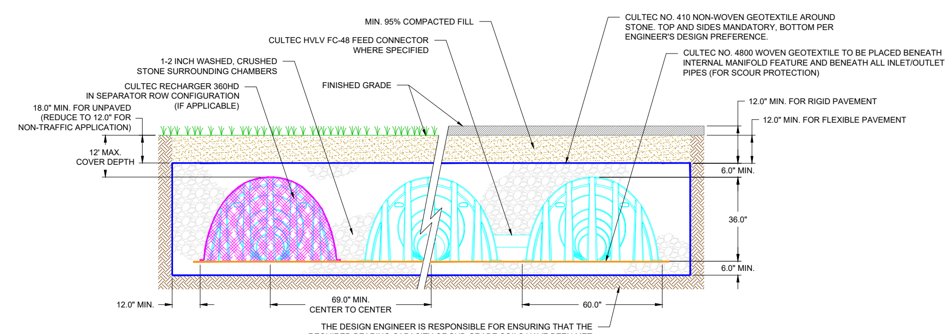
360HD 2.0 **CULTEC RECHARGER 360HD HEAVY DUTY PLAN VIEW**



360HD 3.0 **CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW**

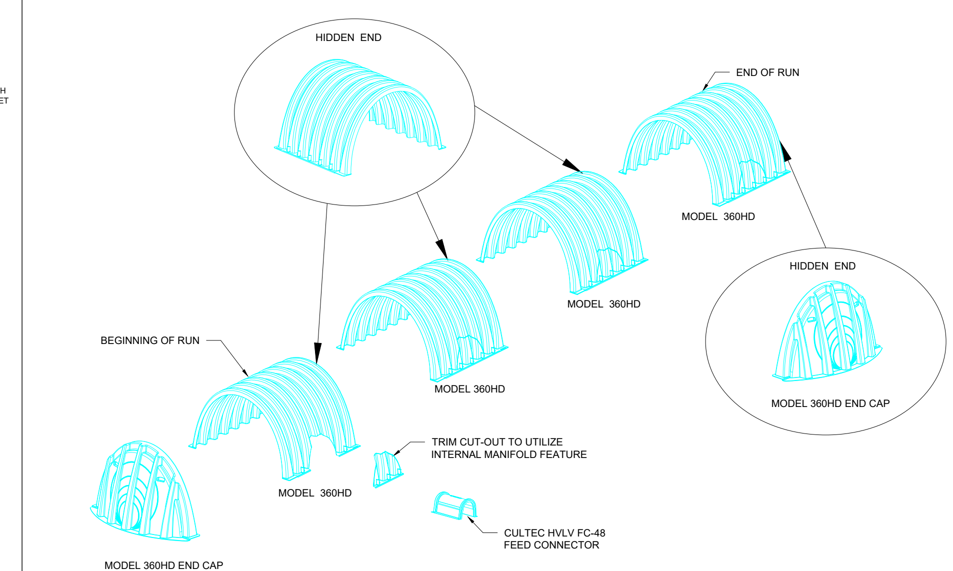


360HD 4.0 **CULTEC RECHARGER 360HD HEAVY DUTY END CAP THREE VIEW**



NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

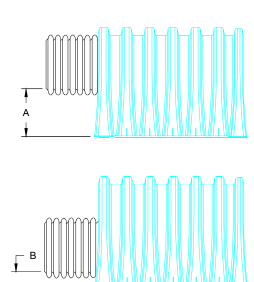
360HD 5.0 **CULTEC RECHARGER 360HD HEAVY DUTY CROSS SECTION**



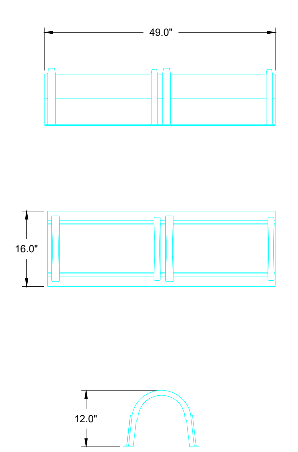
360HD 6.0 **CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK**

PIPE	A	B
6" [150 mm]	26.00" [660 mm]	0.75" [20 mm]
8" [200 mm]	24.00" [600 mm]	1.00" [25 mm]
10" [250 mm]	21.00" [525 mm]	1.25" [32 mm]
12" [300 mm]	18.00" [450 mm]	1.75" [45 mm]
15" [375 mm]	15.00" [375 mm]	2.00" [50 mm]
18" [450 mm]	12.00" [300 mm]	2.25" [58 mm]
24" [600 mm]	6.00" [150 mm]	2.50" [64 mm]

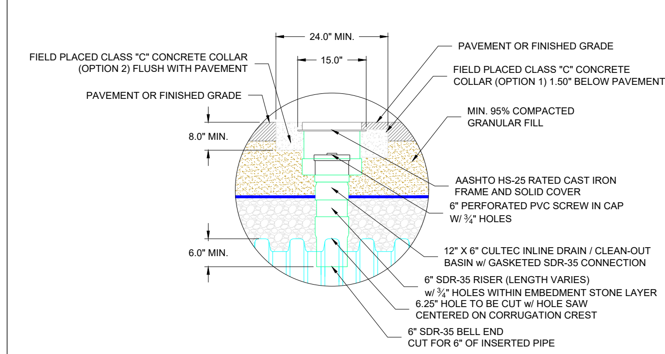
*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. 30" (750 mm) SMOOTH-WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.



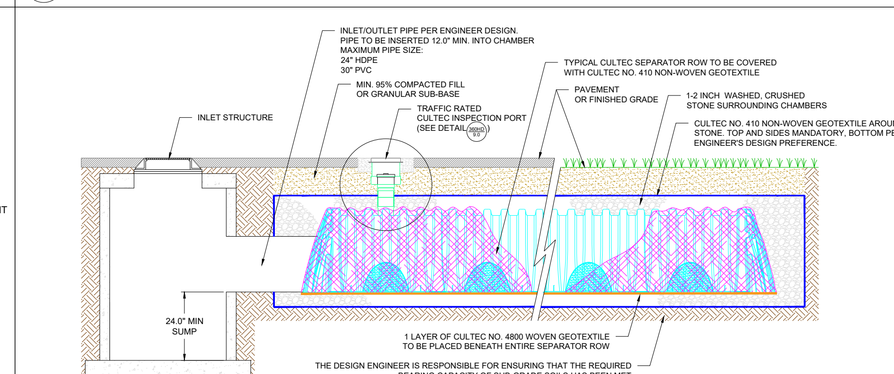
360HD 7.0 **CULTEC RECHARGER 360HD TYPICAL PIPE INVERTS**



360HD 8.0 **CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW**

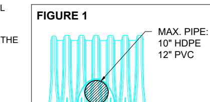


360HD 9.0 **CULTEC INSPECTION PORT - ZOOM DETAIL**



NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

FIGURE 1



ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D.

360HD 10.0 **CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**

CULTEC STORMWATER CHAMBER

PROJECT NO:	21-5445.00	DATE:	10/1/2021
DESIGNED BY:	GCH	CHECKED BY:	JG
SCALE:	N.T.S.	SHEET NO:	5 OF 5

25 PLEASANT ST.
LEICESTER, MA

SYSTEM DETAIL SHEET

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1.02