

# SITE PLANS FOR SOUTH OAKS SITE CONDOMINIUM

CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

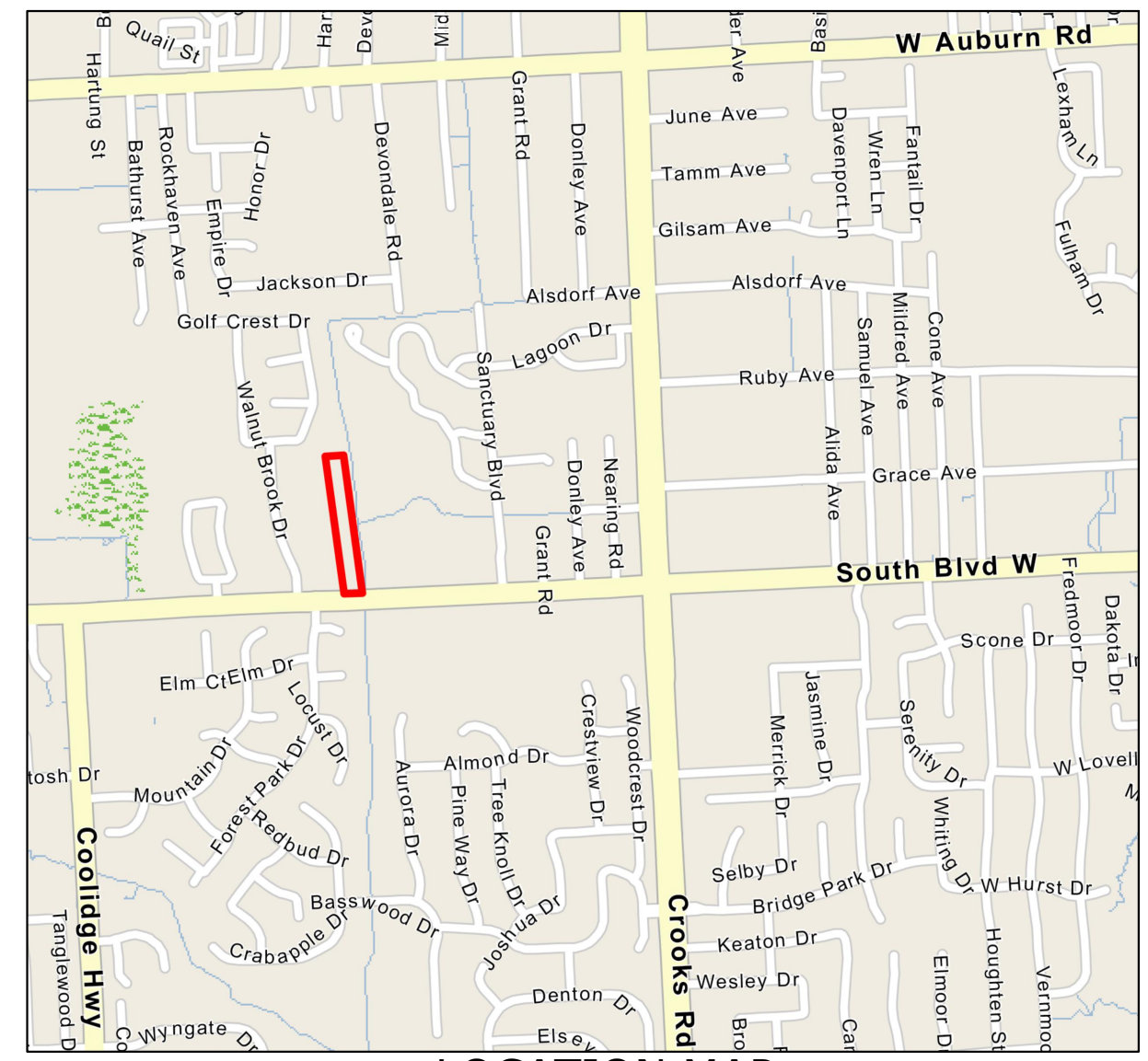
### Site Plan Review

Reviewed for compliance to the City Ordinance, Building and Fire Codes

Department	Reviewer	Approved
Planning	Chris McLeod 248-841-2572 mcleodc@RochesterHills.org	Yes
Building	Mark Artinian 248-841-2446 ArtinianM@RochesterHills.org	Yes
Engineering	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	No
Nat. Resources	Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org	Yes
Fire	Lt. Walter Murphy 248-841-2712 MurphyW@RochesterHills.org	Yes

City of Rochester Hills  
Planning & Economic Development

Conditions and mark-ups noted throughout the plan set must be addressed prior to final approval.



Consulting Civil Engineers  
"Engineering A Better Michigan"

## Powell Engineering & Associates, LLC

4700 Conestoga Drive, White Lake, Michigan 48383  
P: 248.714.5895 info@powellengineeringllc.com

- ### GENERAL NOTES:
- ALL CONSTRUCTION TO CONFORM AND COMPLY TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND OTHER GOVERNMENT AGENCIES.
  - NO LOADING/UNLOADING REQUIRED FOR THIS TYPE OF DEVELOPMENT.
  - WASTE WATER DISPOSAL TO BE EXTENDED TO THE SITE AND DISCHARGED TO THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MDEQ AND TOWNSHIP APPROVAL.
  - WATER SUPPLY TO BE CONNECTED TO THE CITY OF ROCHESTER HILLS PUBLIC WATER SUPPLY.
  - TRASH DISPOSAL TO BE RESIDENTIAL COLLECTION.
  - A SOIL EROSION AND SEDIMENTATION PERMIT FROM OAKLAND COUNTY WATER RESOURCES COMMISSION TO BE REQUIRED.
  - NO STREET LIGHTING PROPOSED. CARRIAGE LIGHTING ON EACH BUILDING ONLY.
  - SIGN DETAILS ARE TO BE PROVIDED TO THE CITY AND APPROVAL GRANTED PRIOR TO THE PLACEMENT OF ANY SIGNS. SEE LANDSCAPE PLANS FOR SIGN DETAILS.
  - CLEAN STONE ENTRANCE DRIVES TO BE CONSTRUCTED AS FIRST PART OF CONSTRUCTION PROVIDE ACCESS FOR FIRE DEPARTMENT AND CONSTRUCTION TRAFFIC DURING CONSTRUCTION.
  - ALL SANITARY AND WATERMAIN WILL BE DEDICATED TO THE CITY OF ROCHESTER HILLS.
  - STORM SEWER DETENTION TO BE PROVIDED ON SITE WITH DETENTION PONDS DISCHARGING TO THE WALTON ROAD DITCHLINE.
  - ALL REQUIREMENTS BY THE FIRE DEPARTMENT PER THE INTERNATIONAL FIRE CODE WILL BE MET.
  - BUILDINGS ARE NOT TO EXCEED 35' IN HEIGHT AND/OR 2 1/2 STORIES.
  - PROPOSED ROADS ARE TO BE PRIVATE AT NO POINT WILL THIS STREET BE ALLOWED TO BECOME PUBLIC OR TRANSFER OWNERSHIP TO THE CITY.

### LOT TABLE:

ACCORDING TO LOT SIZE VARIATION SECTION 138-5.200

LOT #	AREA	FRONT SETBACK	SIDE SETBACK	BACK SETBACK	FRONTAGE
1	9,425 SF	25'	10'	35'	90'
2	9,470 SF	25'	10'	35'	90'
3	9,515 SF	25'	10'	35'	90'
4	9,560 SF	25'	10'	35'	90'
5	9,605 SF	25'	10'	35'	90'
6	10,547 SF	25'	10'	35'	96.29'
7	10,372 SF	25'	10'	35'	94.51'
8	10,383 SF	25'	10'	35'	94.52'
9	13,473 SF	25'	10'	35'	75'
TOTAL	92,347 SF				810.32'
AVERAGE	10,260 SF	25'	10'	35'	90.03'

### SITE INFORMATION:

EXISTING PROPERTY ZONING: R-4  
PROPOSED PROPERTY USE: R-4 LOT SIZE VARIATION  
PROPERTY TAX I.D.: #15-32-376-078  
SITE AREA DATA: SITE AREA = 4.84 ACRES

DEVELOPMENT AREAS  
ROAD R.O.W. AREA= 71,101 SF OR 1.63 ACRES  
TOTAL LOT AREA = 98,551 SF OR 2.26 ACRES  
DETENTION BASIN AREA = 18,028 SF OR 0.42 SF  
EXISTING SITE WETLAND AREA = 19,281 SF  
PROPOSED SITE WETLAND AREA = 9,137 SF  
EXISTING 25' NATURAL FEATURE SETBACK AREA = 67,724 SF  
PROPOSED DISRUPTION 25' WETLAND SETBACK = 22,843 SF  
EXISTING FLOODPLAIN VOLUME REMOVED = 6,773 CF  
PROPOSED MITIGATED FLOODPLAIN VOLUME = 7,590 SF

### LOT CONFIGURATION SCHEDULE:

	REQUIRED	AVG. PROVIDED
LOT SIZE	9600 SF	9855 SF
LOT WIDTH	80 FT	87.2 FT
BUILDING HEIGHT	30 FT	30 FT
FRONT SETBACK	25 FT	25 FT
SIDE SETBACK	20 FT (BOTH)	20 FT (BOTH)
REAR SETBACK	35 FT	35 FT
MIN. FLOOR AREA	912 SF	912 SF
MAX COVERAGE	30%	30%

- ### SHEET INDEX
- S-1 GENERAL & DIMENSIONAL
  - S-2 GRADING PLAN (SOUTH)
  - S-3 GRADING PLAN (NORTH)
  - S-4 UTILITY PLAN (SOUTH)
  - S-5 UTILITY PLAN (NORTH)
  - S-6 WETLAND PLAN
  - 1 of 1 TOPOGRAPHIC SURVEY (by Reichert Surveying)
  - L-1 LANDSCAPE PLAN (1 OF 4)
  - L-2 LANDSCAPE PLAN (2 OF 4)
  - L-3 LANDSCAPE PLAN (3 OF 4)
  - L-4 LANDSCAPE PLAN (4 OF 4)

### REQUIRED PERMITS:

DESCRIPTION	AGENCIES APPROVAL REQUIRED
OVERALL CONSTRUCTION	CITY OF ROCHESTER HILLS
WETLAND FILLING PERMIT	CITY OF ROCHESTER HILLS MICHIGAN EGLE
PRIVATE DRIVE	CITY OF ROCHESTER HILLS
WATERMAIN (WATER SUPPLY)	CITY OF ROCHESTER HILLS OAKLAND COUNTY WATER RESOURCES COMMISSION MICHIGAN EGLE
SANITARY (PART 41)	CITY OF ROCHESTER HILLS MICHIGAN EGLE
STORM WATER DISCHARGE	CITY OF ROCHESTER HILLS OAKLAND COUNTY WATER RESOURCES COMMISSION
ENTRANCE DRIVE	ROAD COMMISSION FOR OAKLAND COUNTY
SOIL EROSION CONTROL	OAKLAND COUNTY WATER RESOURCES COMMISSION
NPDES	MICHIGAN EGLE

### PARKING CALCULATIONS

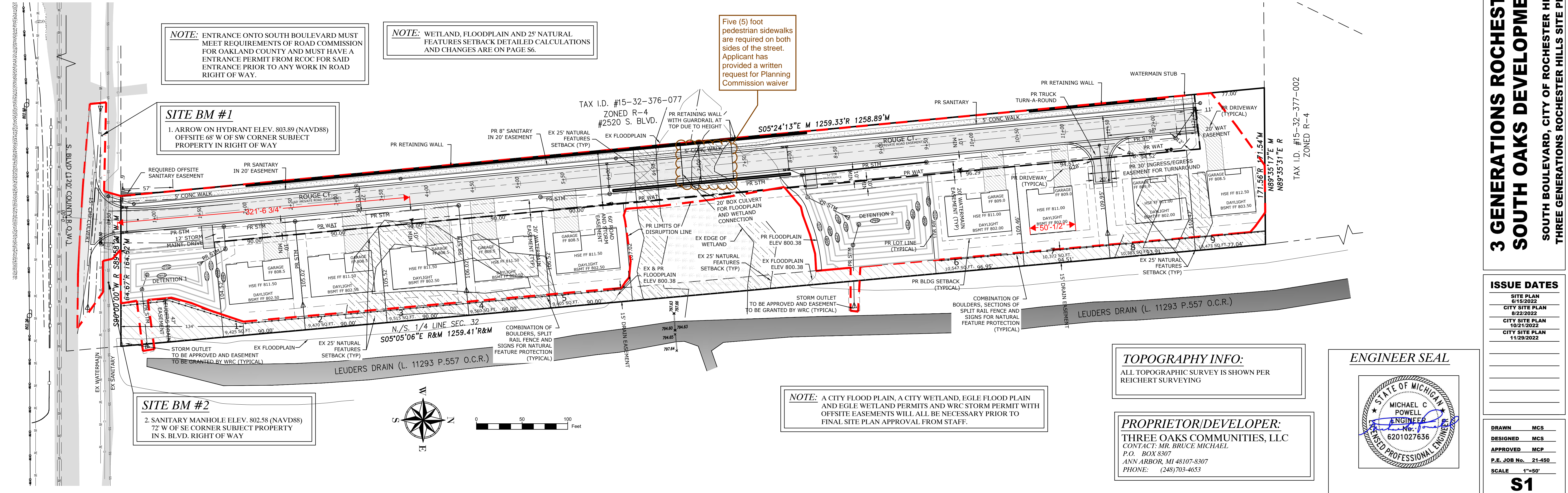
REQUIRED 2 SPACES PER HOME = 18 SPACES  
PROVIDED SPACES:  
LOTS 1 - 6 = 6 SPACES (3 GARAGE, 3 DRIVEWAY)  
LOTS 7 - 9 = 4 SPACES (2 GARAGE, 2 DRIVEWAY)  
48 SPACES  
THEREFORE, OK.

### LEGAL DESCRIPTION (TAX I.D. 15-32-376-078):

T3N, R11E, SECTION 32, CITY OF ROCHESTER HILLS, COUNTY OF OAKLAND, STATE OF MICHIGAN AND DESCRIBED AS FOLLOWS: LOT 10, SUPERVISOR'S PLAT OF MESSMORE FARMS SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 66 OF PLATS, PAGE(S) 16, OAKLAND COUNTY RECORDS.

Provide a legend showing what the different hatchings are.

BEFORE YOU DIG  
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1-800-482-7171



**NOTE:** ENTRANCE ONTO SOUTH BOULEVARD MUST MEET REQUIREMENTS OF ROAD COMMISSION FOR OAKLAND COUNTY AND MUST HAVE AN ENTRANCE PERMIT FROM RCOC FOR SAID ENTRANCE PRIOR TO ANY WORK IN ROAD RIGHT OF WAY.

**NOTE:** WETLAND, FLOODPLAIN AND 25' NATURAL FEATURES SETBACK DETAILED CALCULATIONS AND CHANGES ARE ON PAGE S6.

Five (5) foot pedestrian sidewalks are required on both sides of the street. Applicant has provided a written request for Planning Commission waiver

**SITE BM #1**  
1. ARROW ON HYDRANT ELEV. 803.89 (NAVD88)  
OFFSITE 68' W OF SW CORNER SUBJECT PROPERTY IN RIGHT OF WAY

**SITE BM #2**  
2. SANITARY MANHOLE ELEV. 802.58 (NAVD88)  
72' W OF SE CORNER SUBJECT PROPERTY IN S. BLVD. RIGHT OF WAY

**NOTE:** A CITY FLOOD PLAN, A CITY WETLAND, EGLE FLOOD PLAN AND EGLE WETLAND PERMITS AND WRC STORM PERMIT WITH OFFSITE EASEMENTS WILL ALL BE NECESSARY PRIOR TO FINAL SITE PLAN APPROVAL FROM STAFF.

**TOPOGRAPHY INFO:**  
ALL TOPOGRAPHIC SURVEY IS SHOWN PER REICHERT SURVEYING

**PROPRIETOR/DEVELOPER:**  
THREE OAKS COMMUNITIES, LLC  
CONTACT: MR. BRUCE MICHAEL  
P.O. BOX 8307  
ANN ARBOR, MI 48107-8307  
PHONE: (248)703-4653

**ENGINEER SEAL**

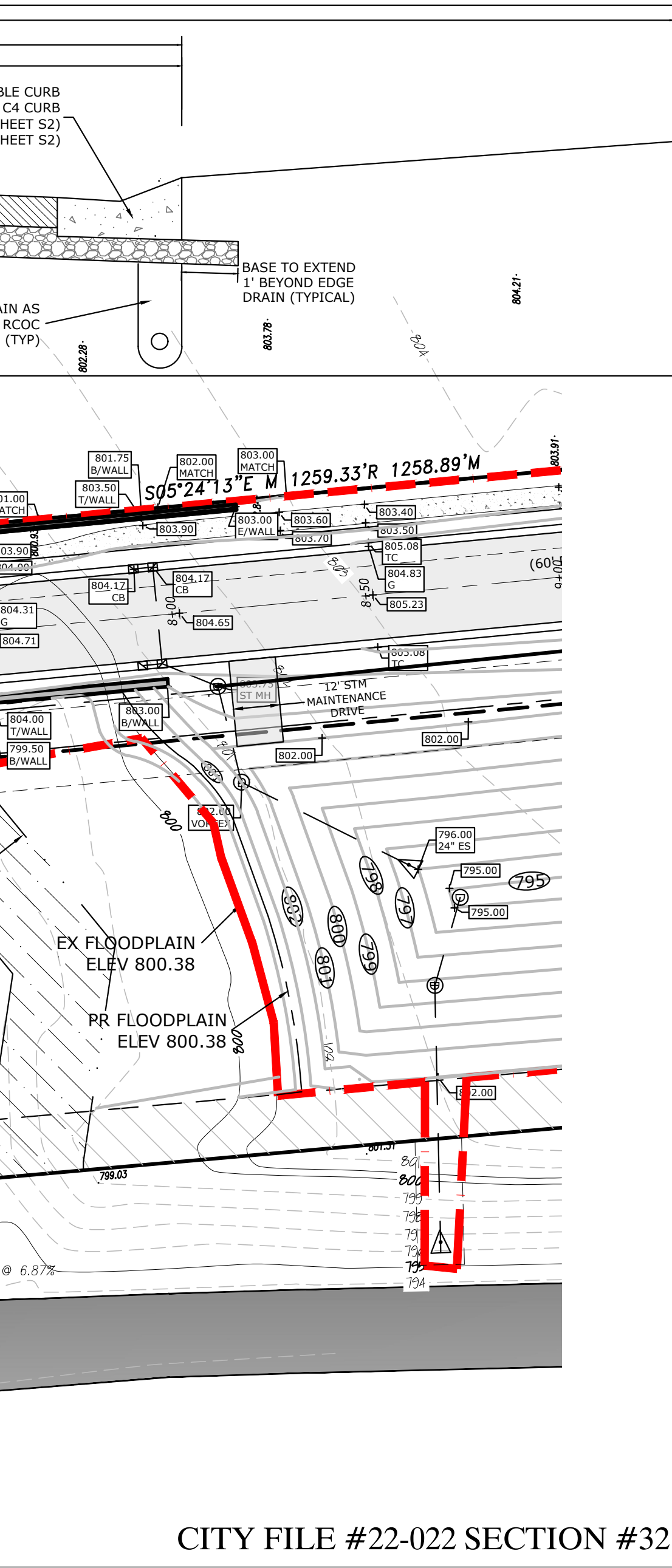
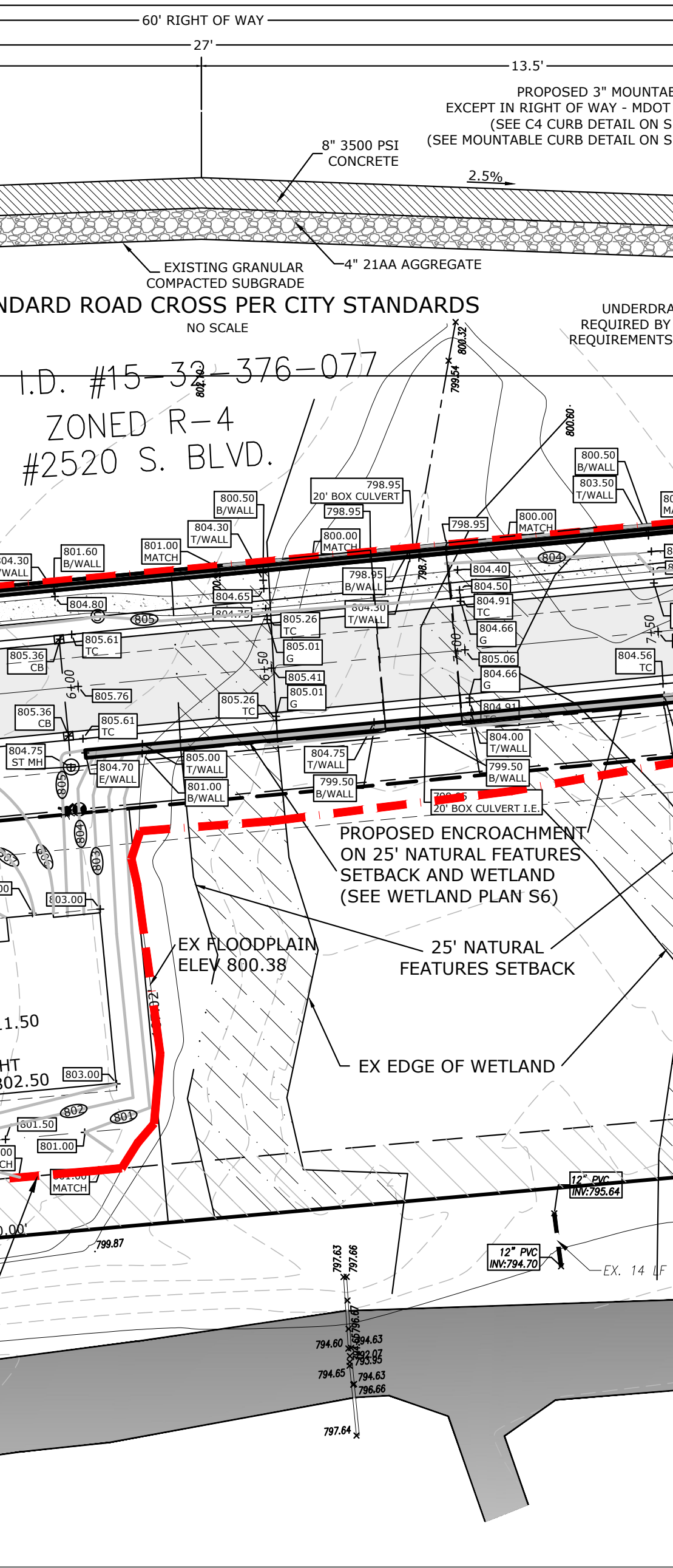
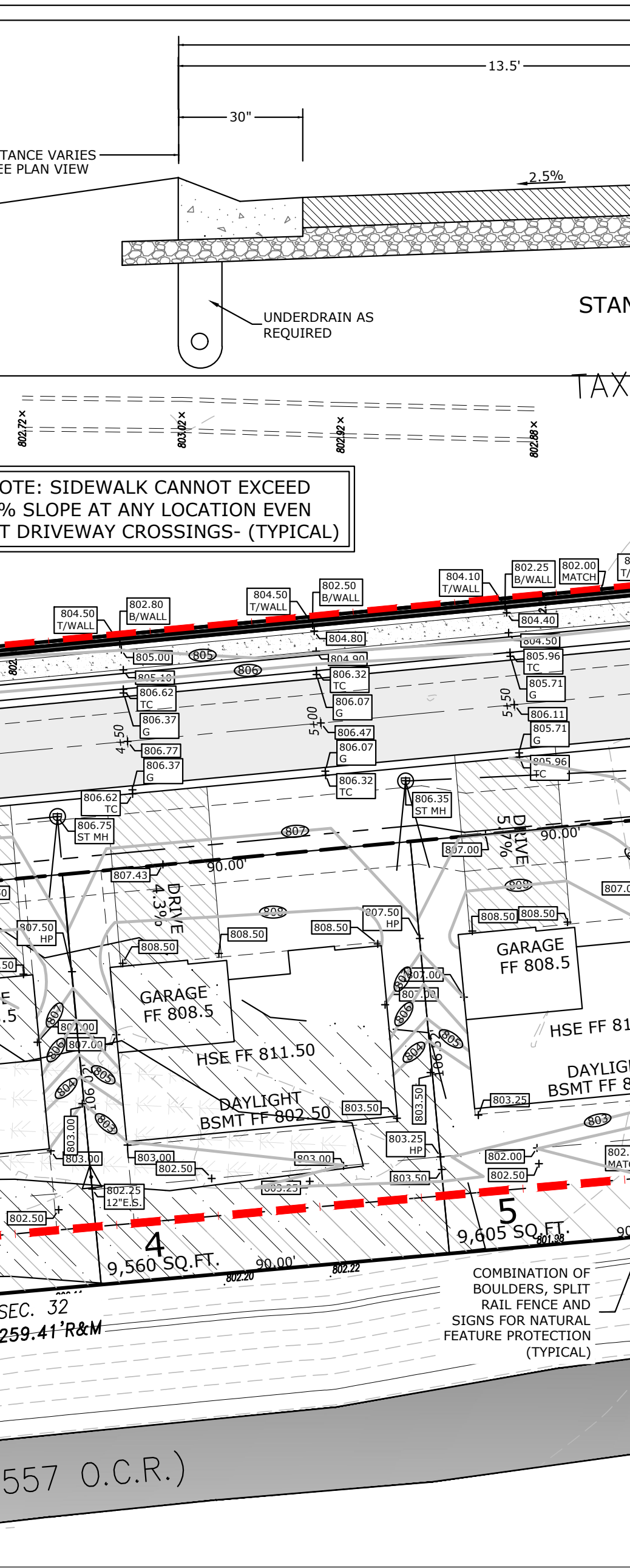
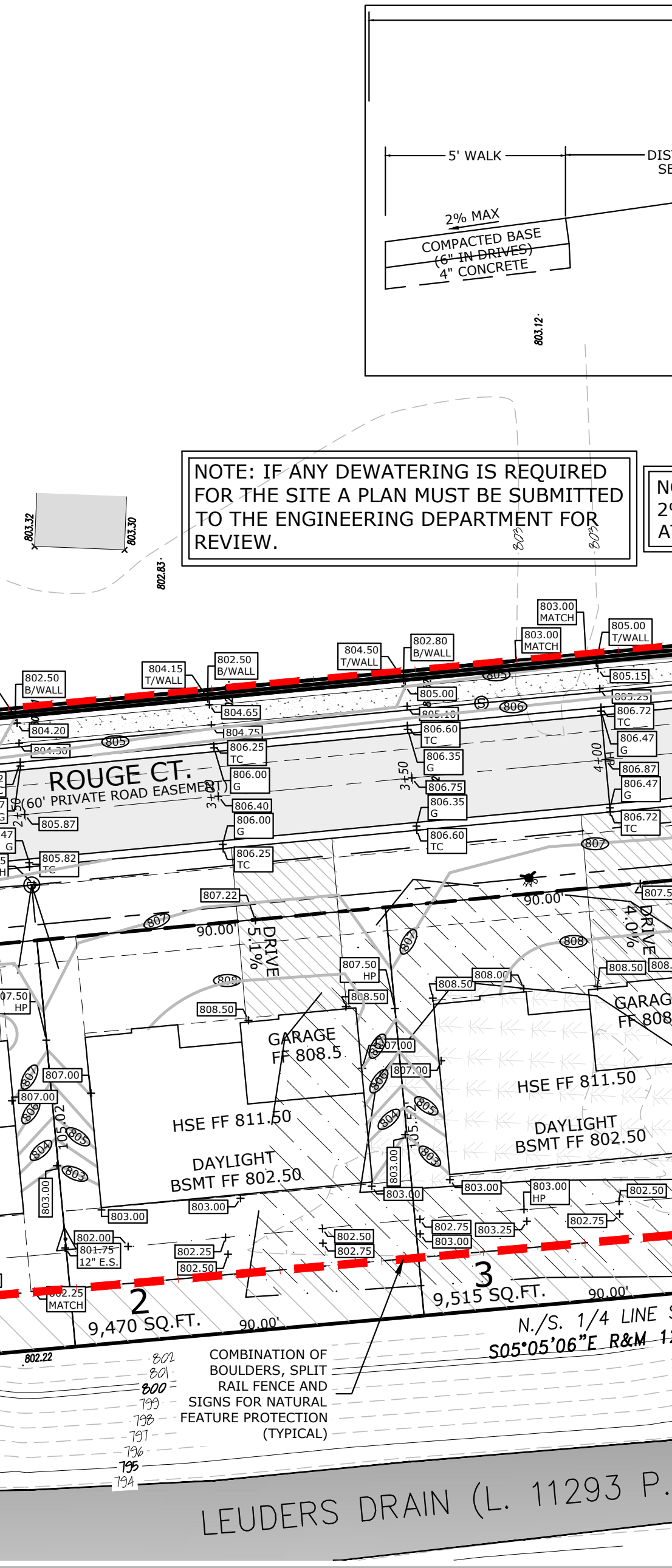
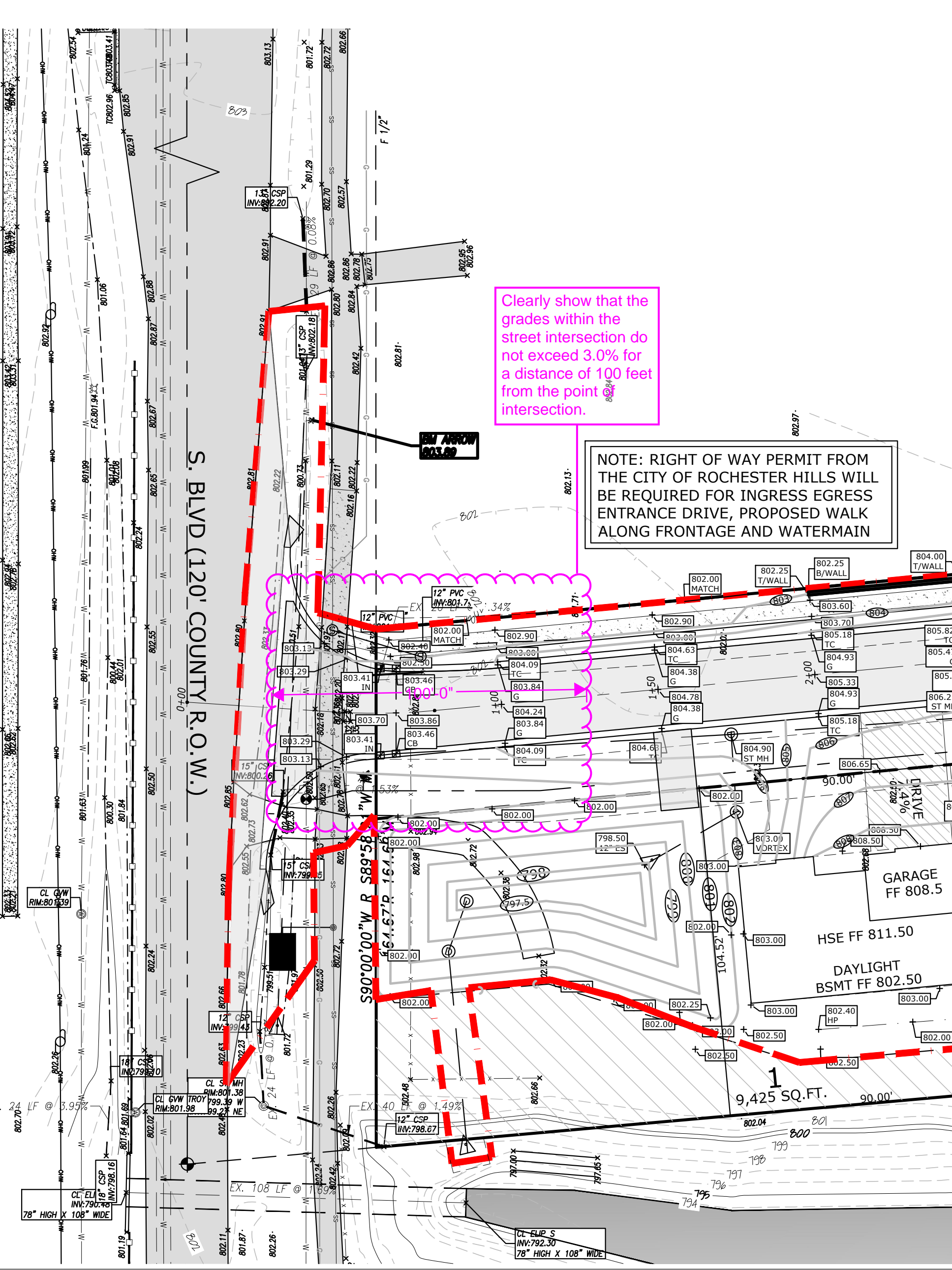
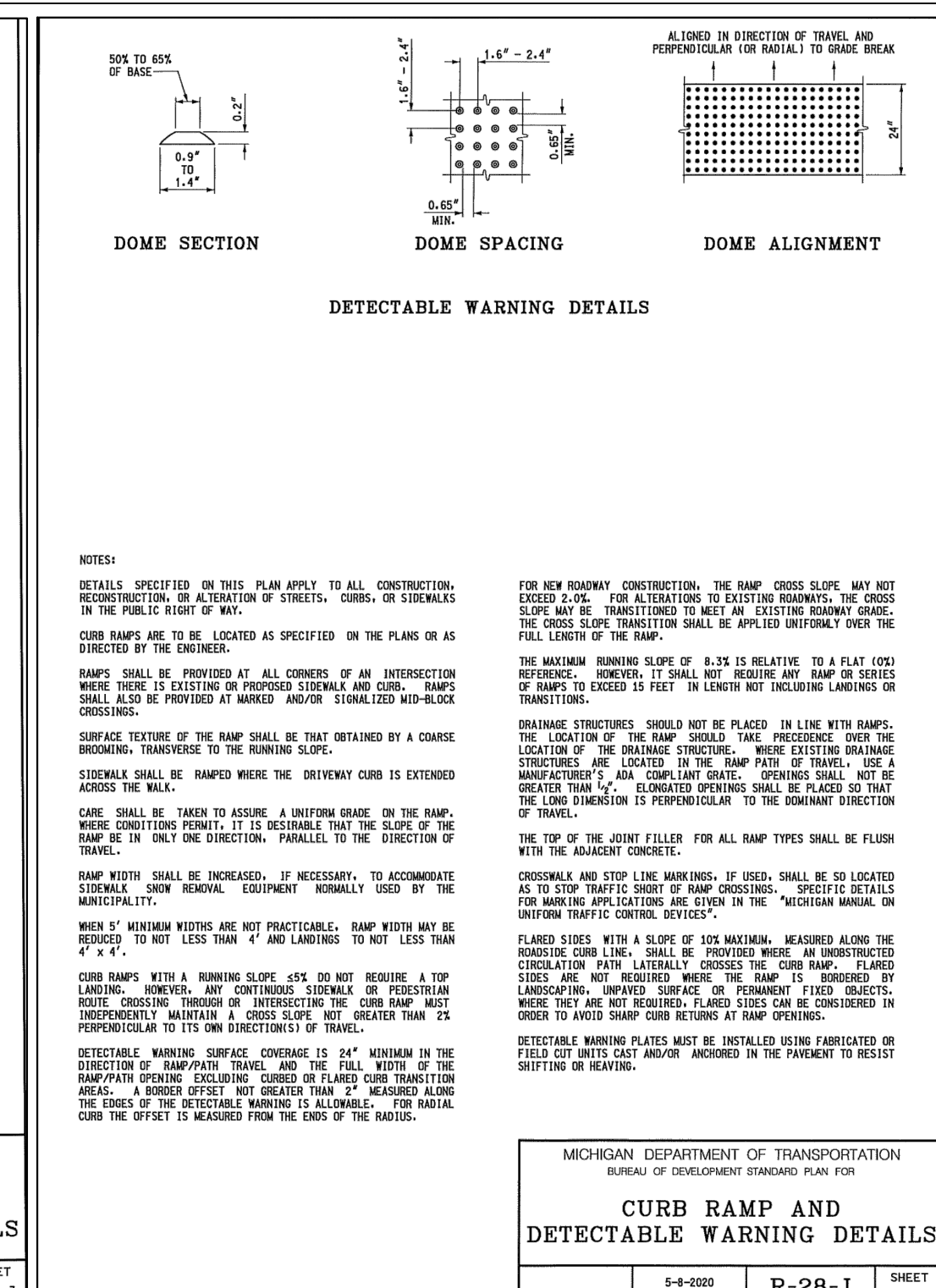
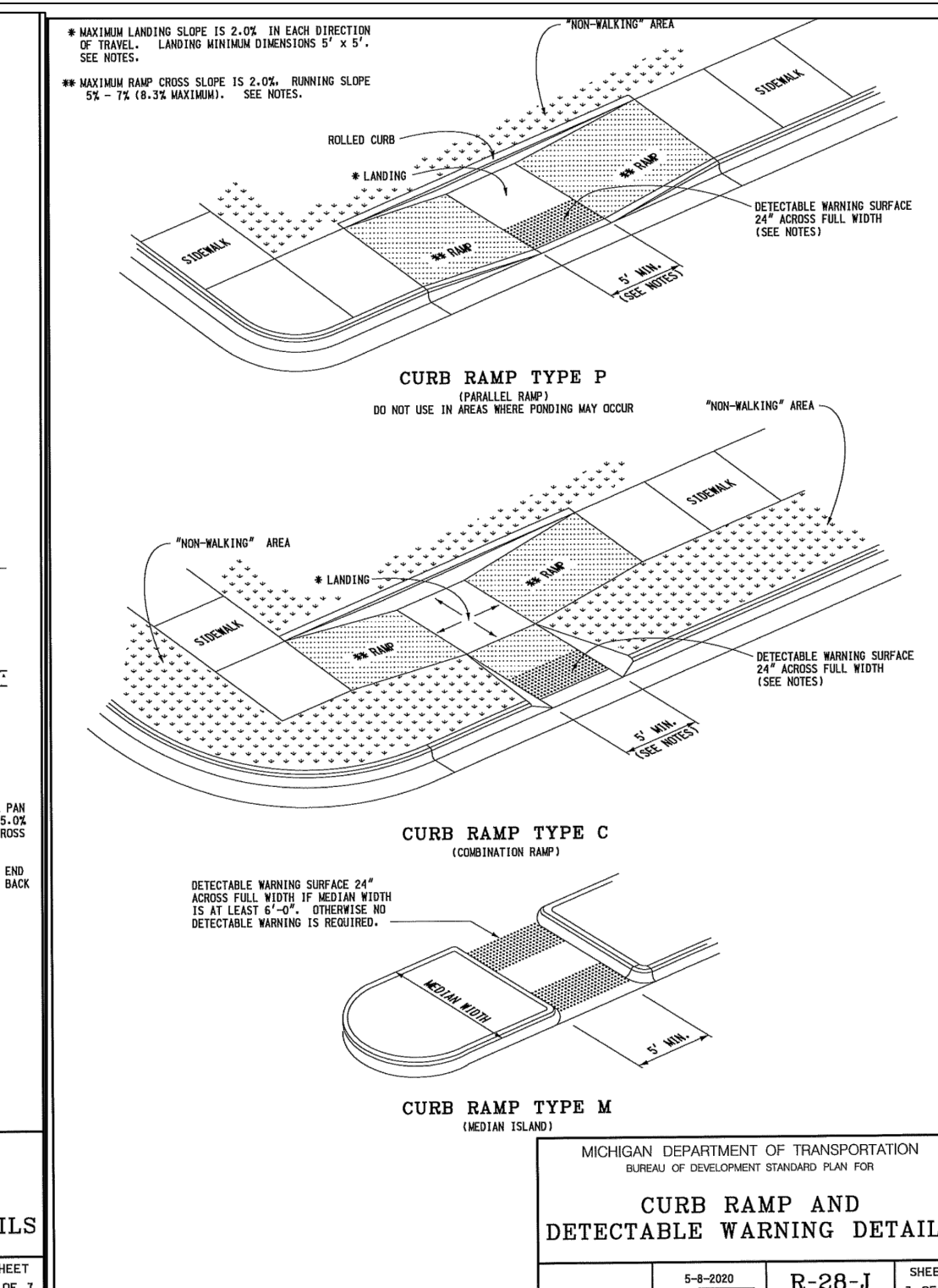
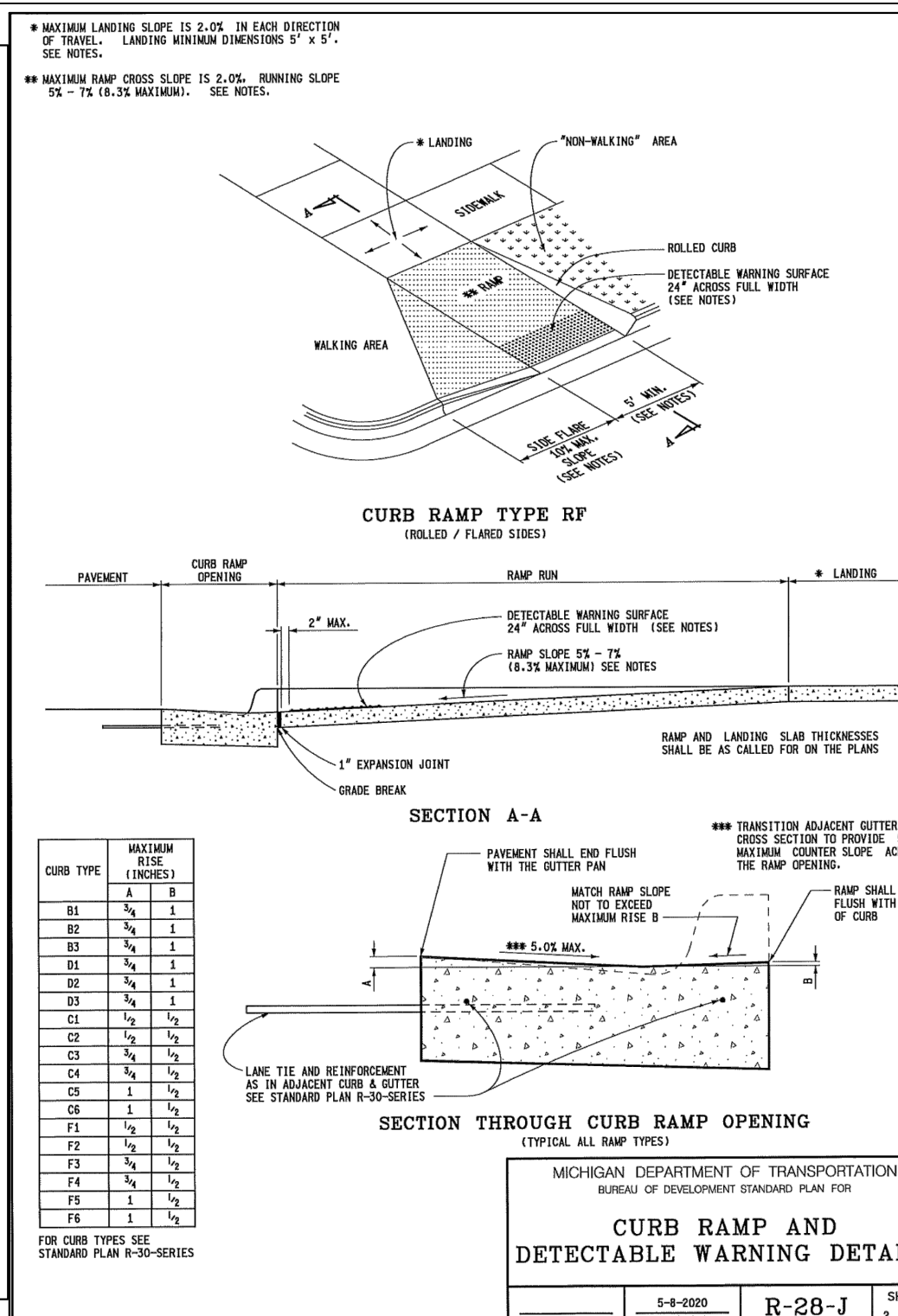
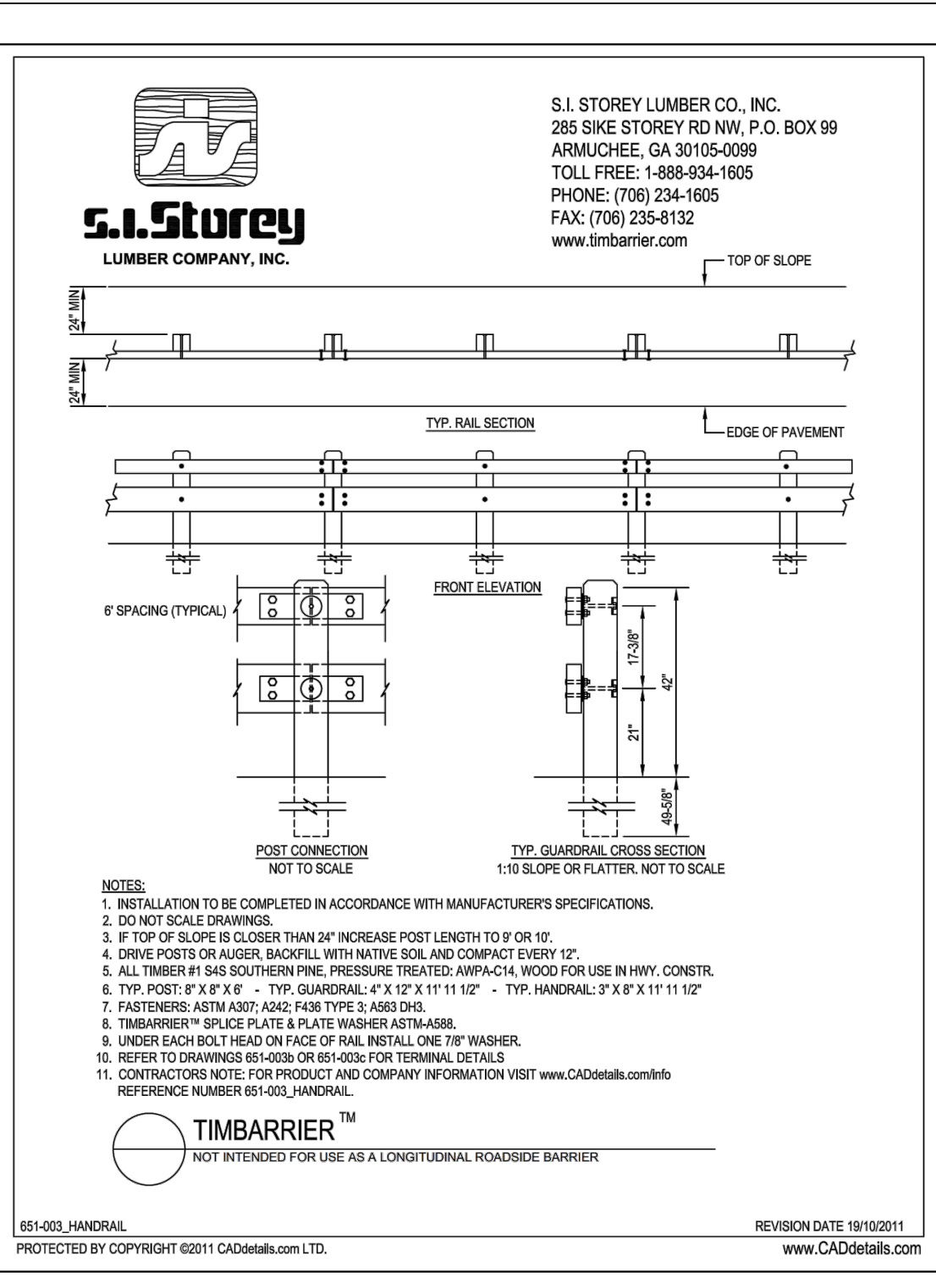
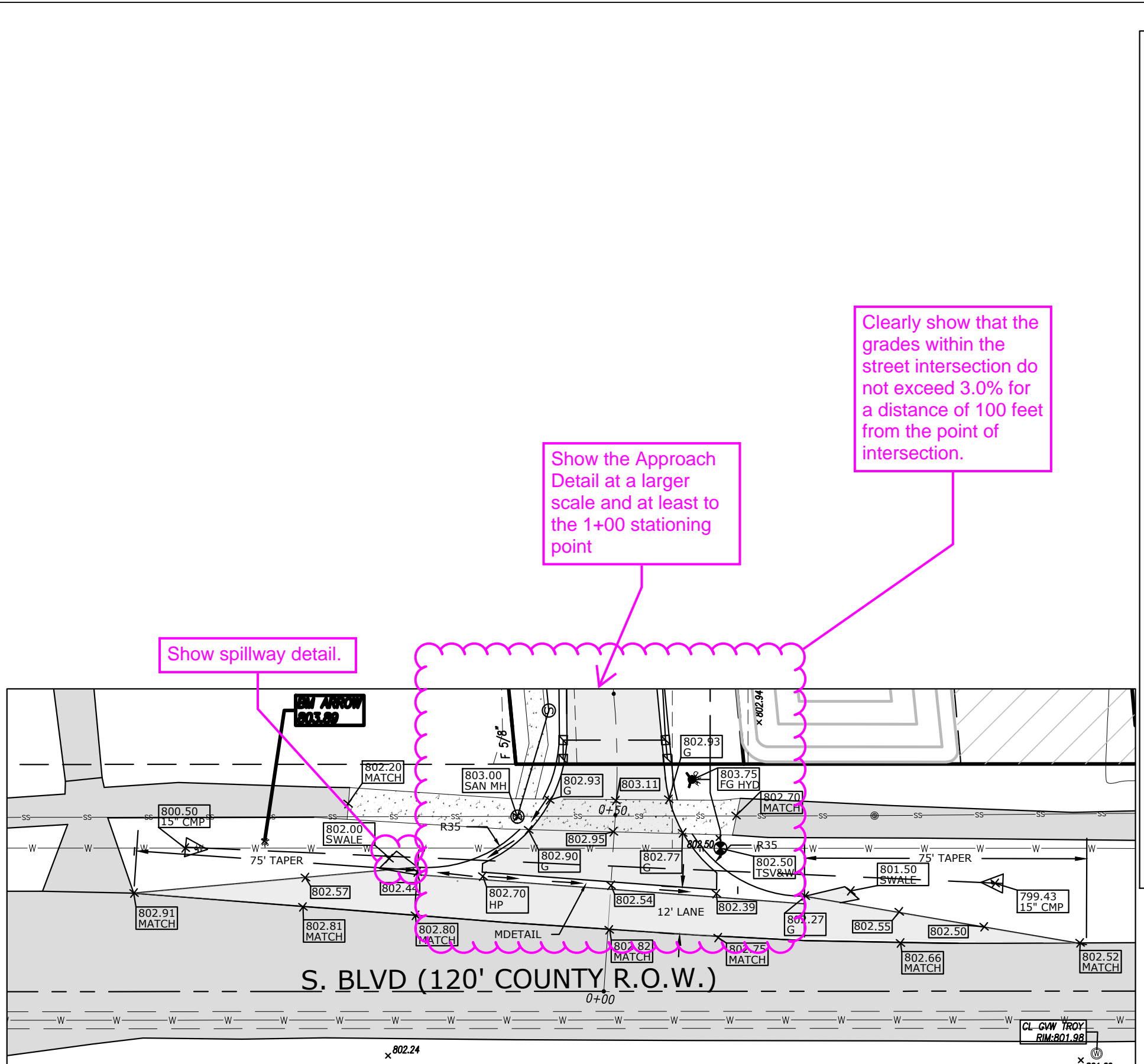
**3 GENERATIONS ROCHESTER SOUTH OAKS DEVELOPMENT**  
SOUTH BOULEVARD, CITY OF ROCHESTER HILLS  
THREE GENERATIONS ROCHESTER HILLS SITE PLANS

### ISSUE DATES

SITE PLAN	6/15/2022
CITY SITE PLAN	8/22/2022
CITY SITE PLAN	10/21/2022
CITY SITE PLAN	11/29/2022

DRAWN	MCS
DESIGNED	MCS
APPROVED	MCP
P.E. JOB No.	21-450
SCALE	1"=50'
<b>S1</b>	SITE PLAN





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**SOUTH BOULEVARD GRADING PLAN (SOUTH)**  
WALTON BOULEVARD, CITY OF ROCHESTER HILLS  
THREE GENERATIONS ROCHESTER HILLS SITE PLANS

**ISSUE DATES**

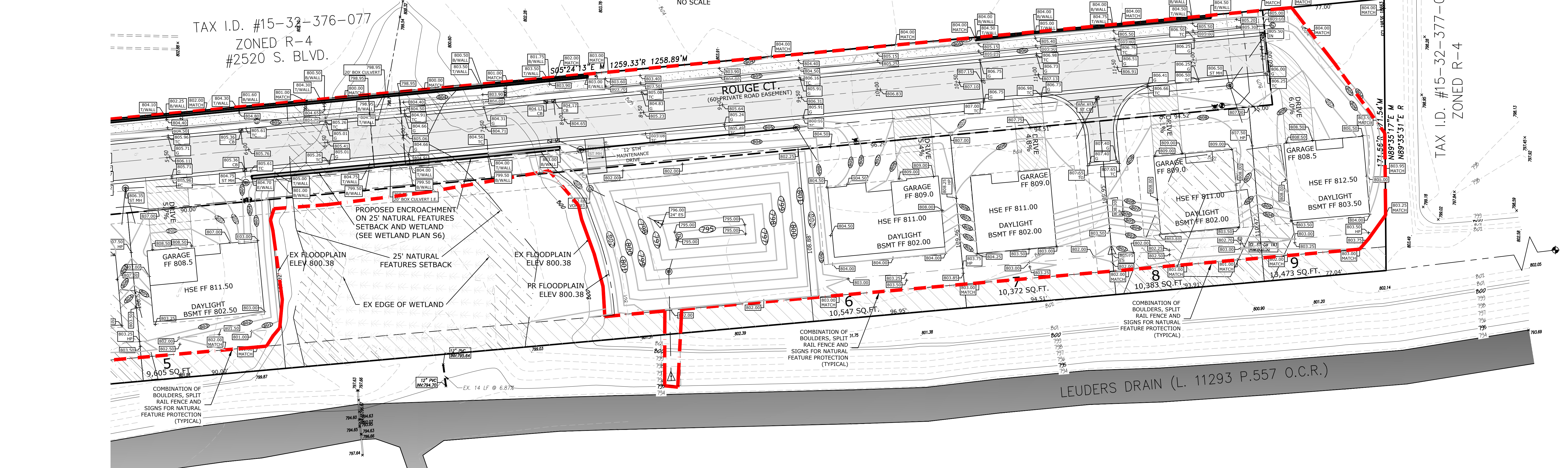
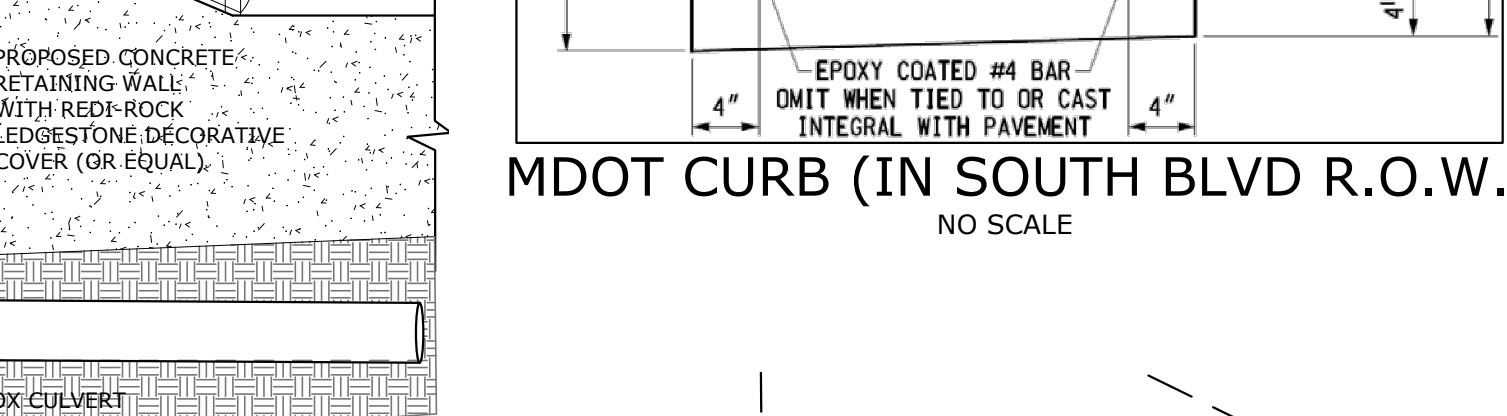
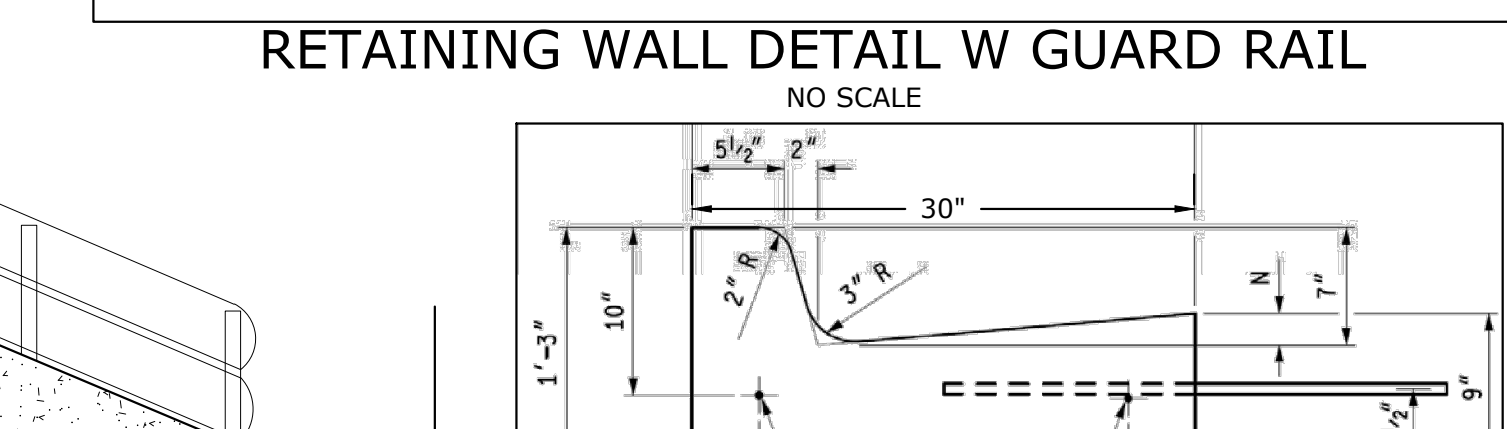
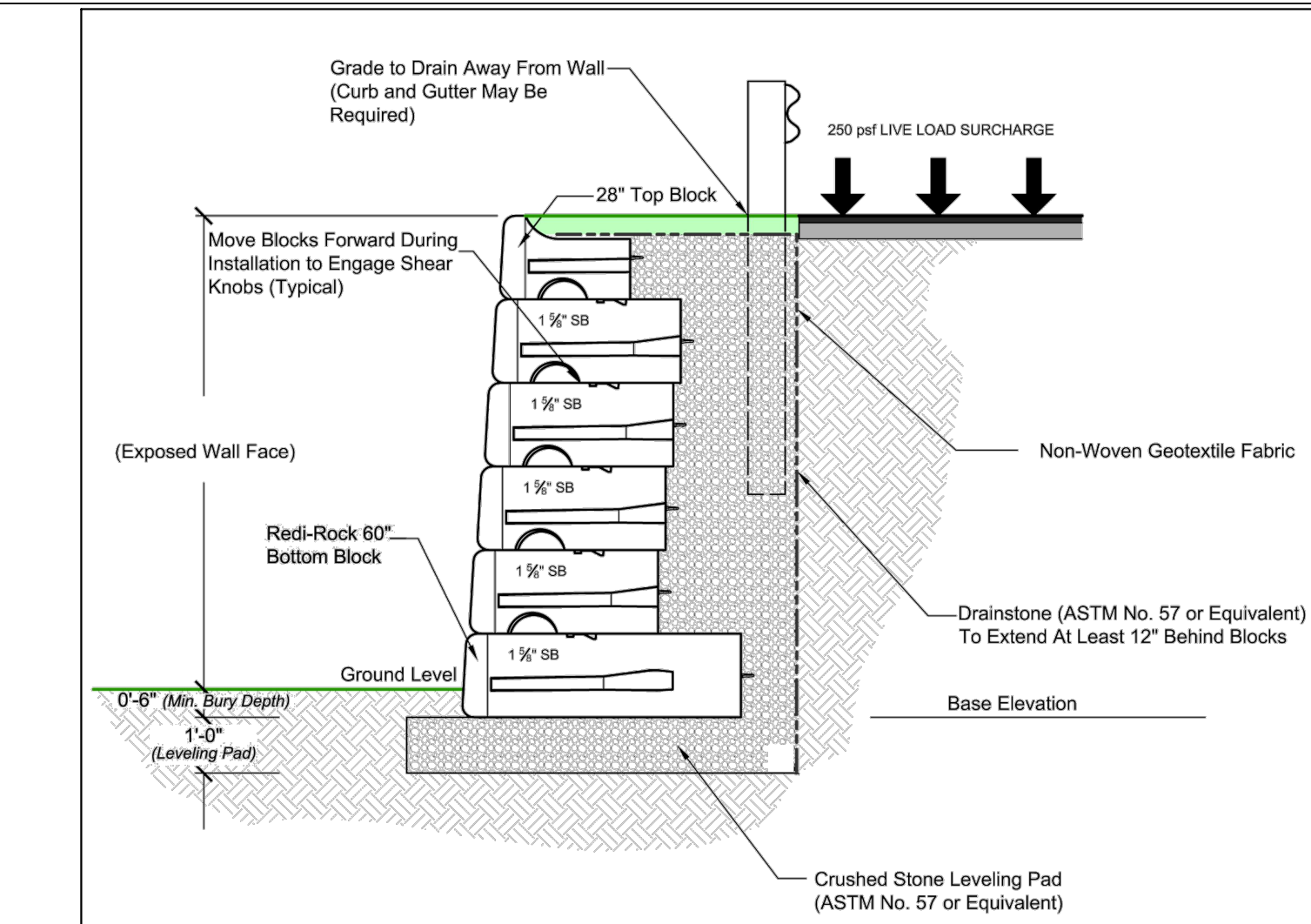
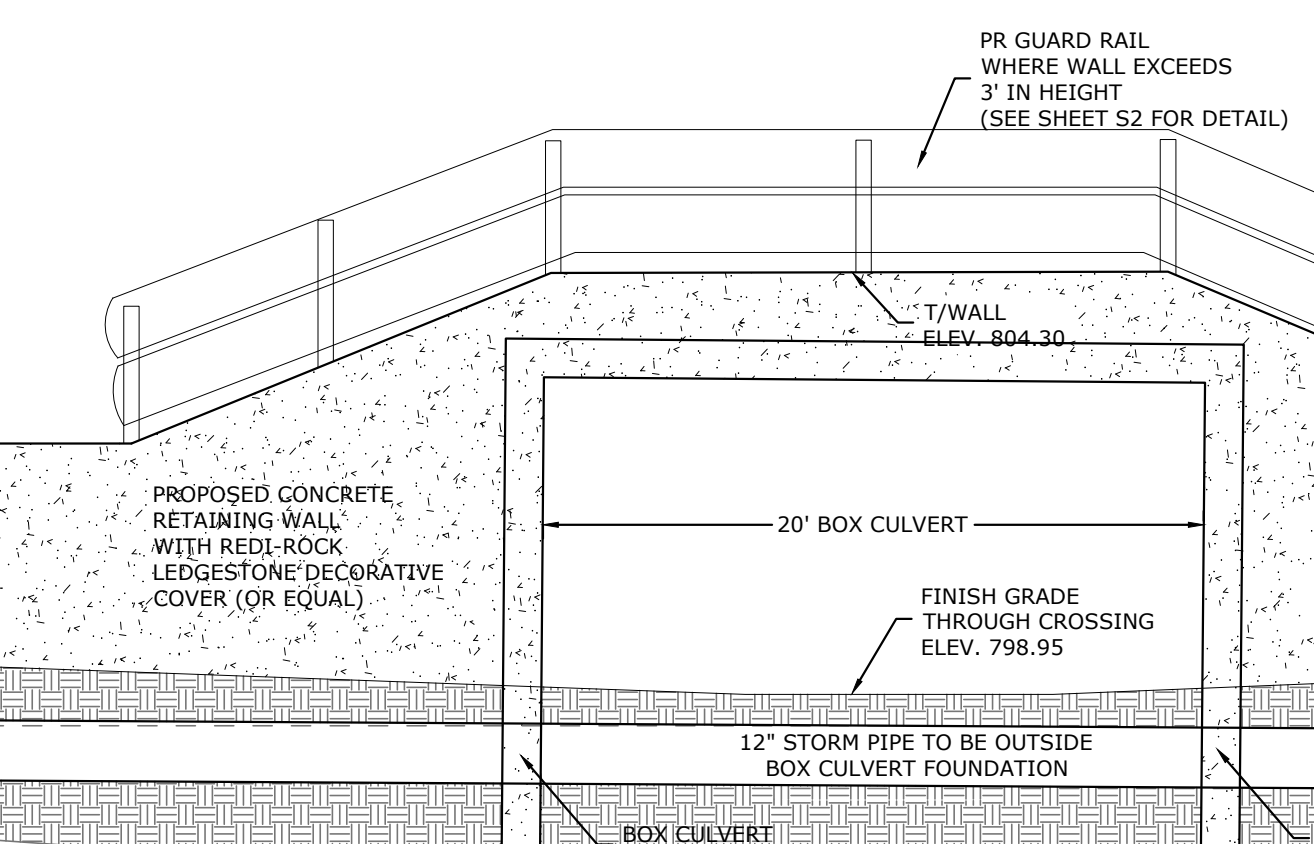
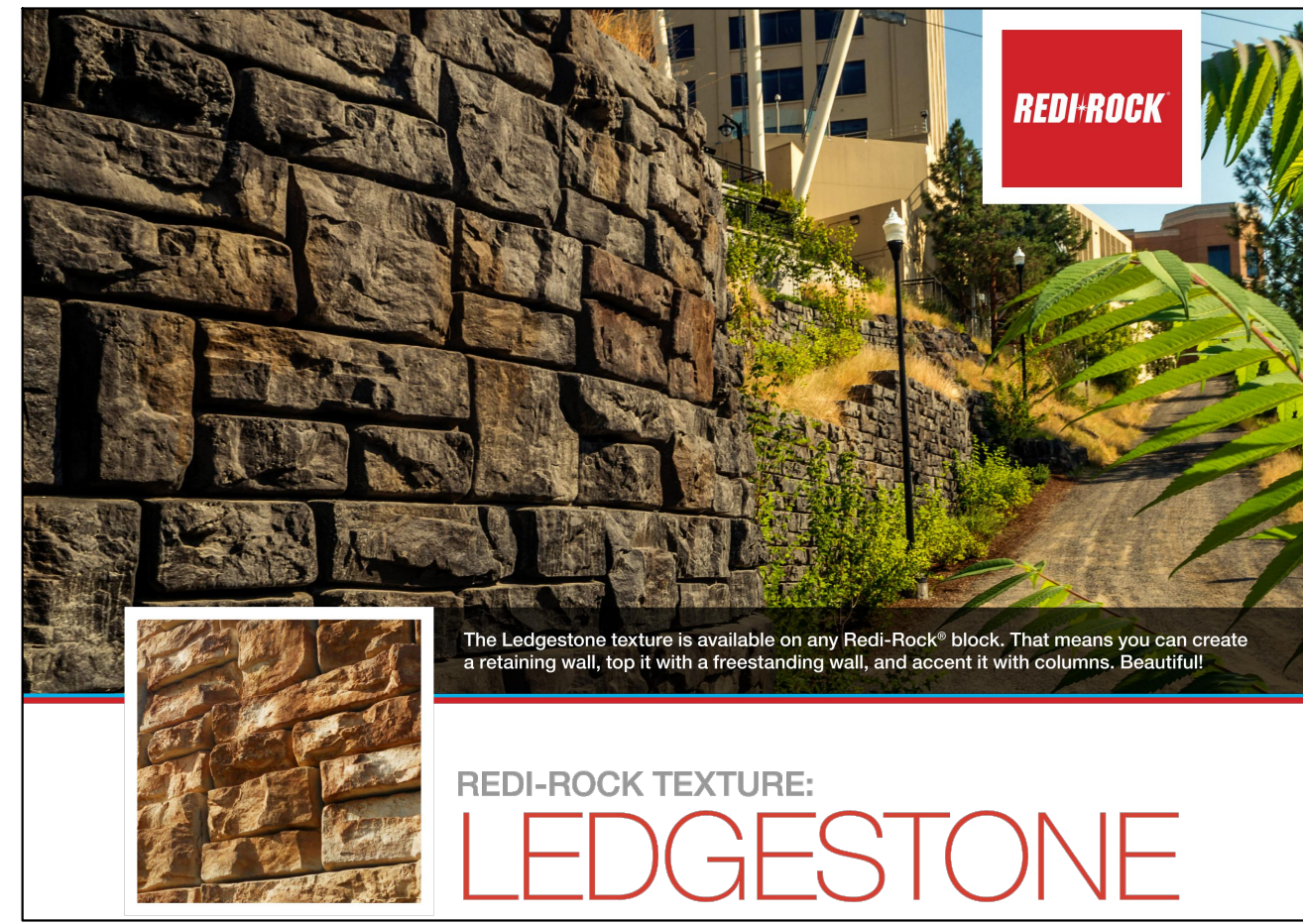
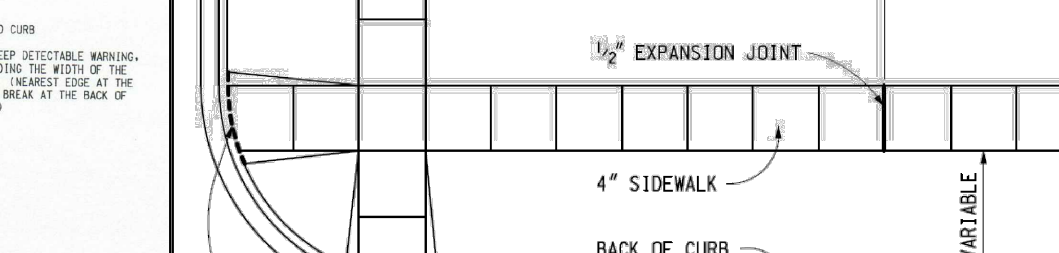
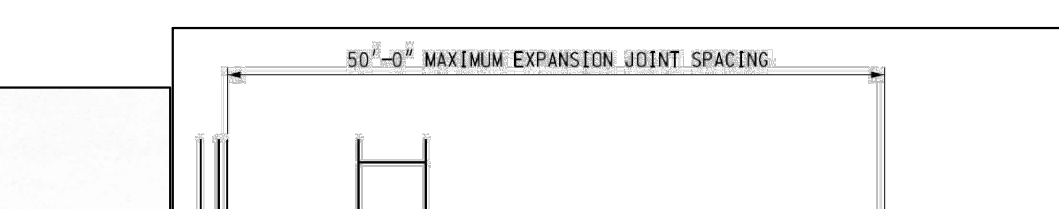
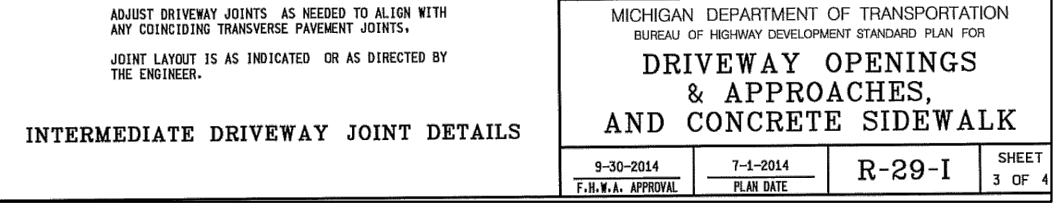
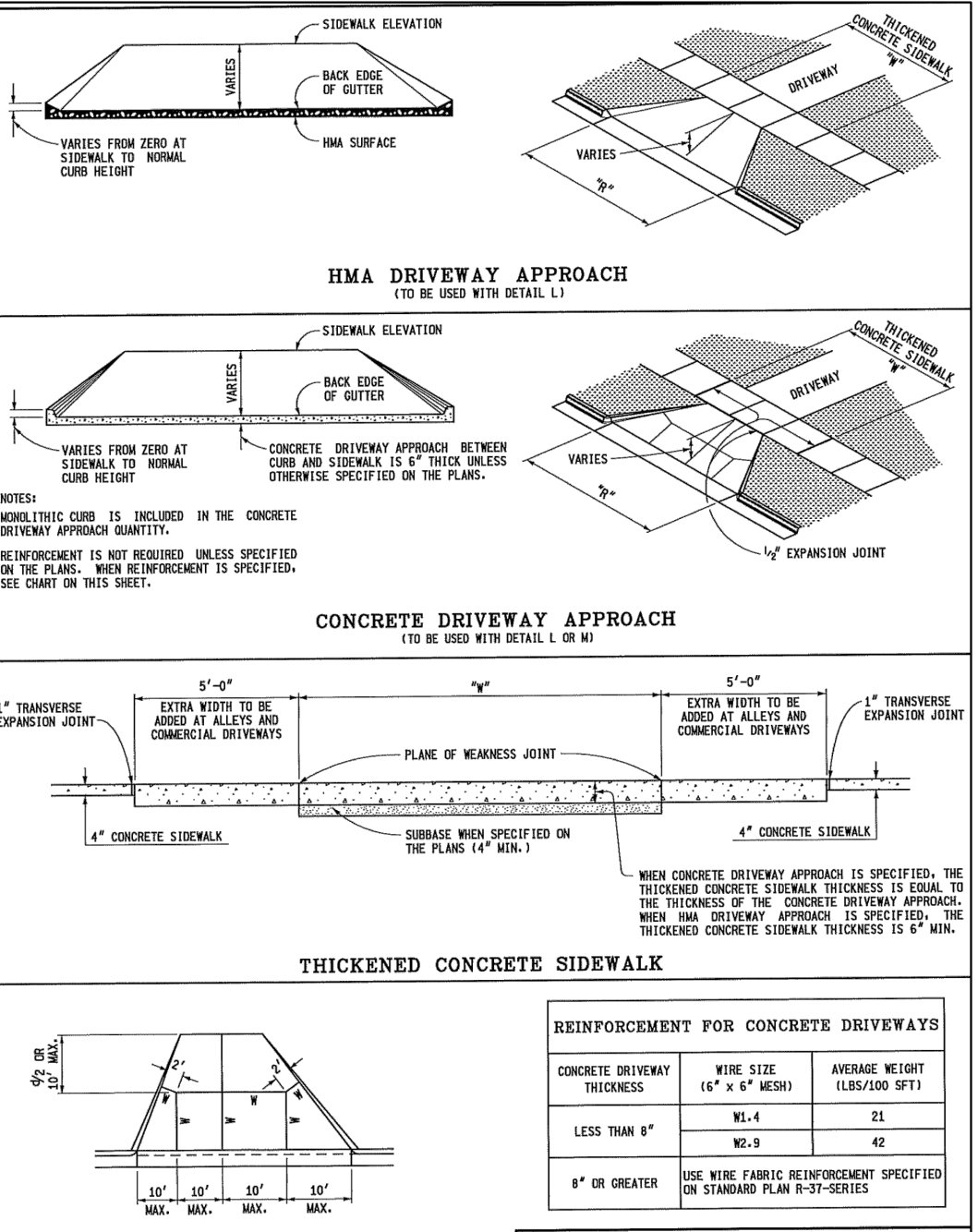
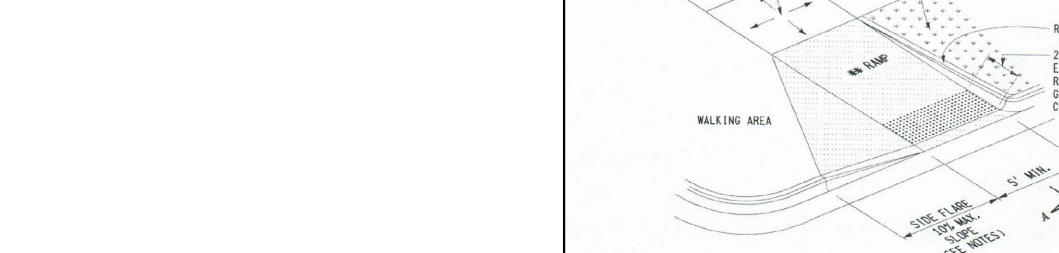
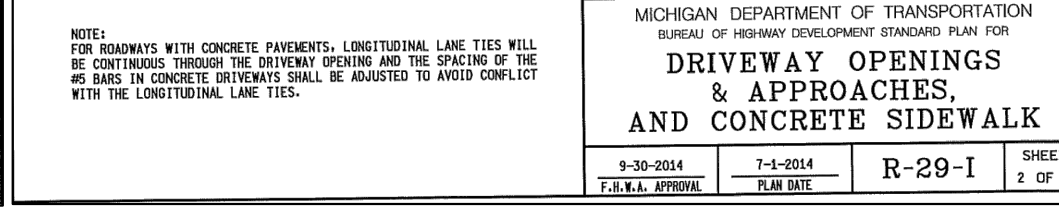
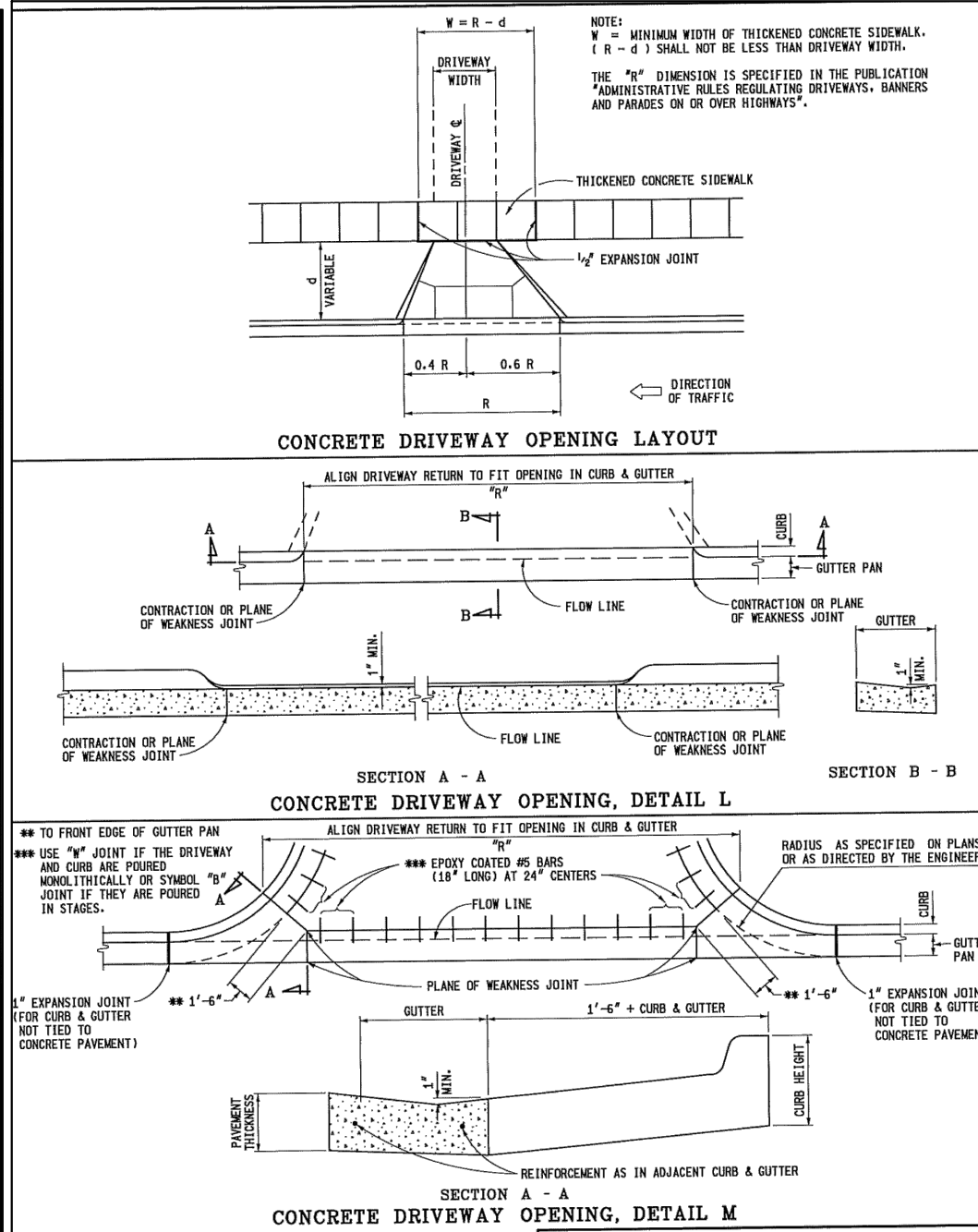
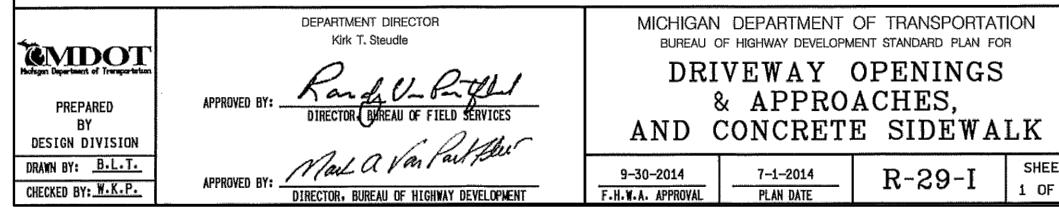
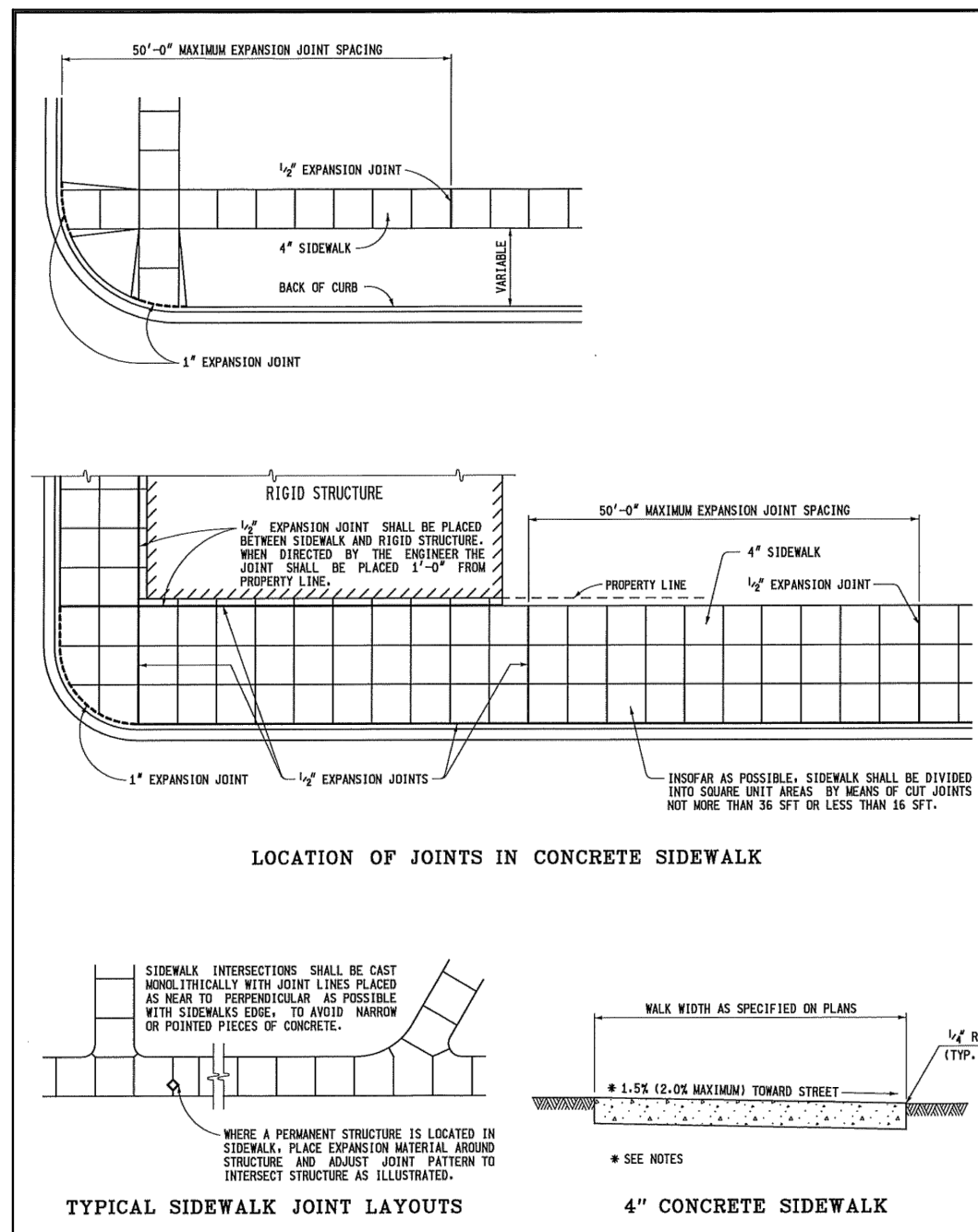
CITY SITE PLAN	DATE
8/15/2022	8/15/2022
8/22/2022	8/22/2022
10/21/2022	10/21/2022
12/1/2022	12/1/2022

**DRAWN** MCS  
**DESIGNED** MCS  
**APPROVED** MCP  
**P.E. JOB NO.** 21-450  
**SCALE** 1"=30'  
**S2**  
**SITE PLAN**

**CITY FILE #22-022 SECTION #32**

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**SOUTH BOULEVARD GRADING PLAN (NORTH)**  
WALTON BOULEVARD, CITY OF ROCHESTER HILLS  
THREE GENERATIONS ROCHESTER HILLS SITE PLANS

**ISSUE DATES**  
CITY SITE PLAN 8/15/2022  
CITY SITE PLAN 8/22/2022  
CITY SITE PLAN 10/21/2022  
CITY SITE PLAN 12/1/2022

**DRAWN** MCS  
**DESIGNED** MCS  
**APPROVED** MCP  
**P.E. JOB NO.** 21-450  
**SCALE** 1"=30'  
**S3**  
SITE PLAN



NOTE: ALL HOUSE SUMP PUMPS MUST BE PICKED UP TO GO INTO STORM SYSTEM AS SHOWN.

NOTE: ALL STORM SEWERS TO MEET THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY WATER RESOURCE COMMISSIONER ENGINEERING REQUIREMENTS.

NOTE: ALL SANITARY TO MEET THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY WATER RESOURCE COMMISSIONER AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

NOTE: ALL WATERMAIN TO MEET THE CITY OF ROCHESTER HILLS AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

**STORM WATER CALCULATIONS - STORM AREA 1**

**DETERMINATION OF 'C' FACTOR**

TOTAL AREA GOING INTO POND (GROSS & NET)	=	1.12 ACRES			
PAVING AREA (WALKS, DRIVES, ROAD)	=	0.29 ACRES	@	0.95	= 0.27
BUILDING AREA	=	0.29 ACRES	@	0.95	= 0.27
LAWN AREA	=	0.5 ACRES	@	0.25	= 0.13
DETENTION AND WETLAND (LOW WATER AREA)	=	0.03 ACRES	@	1.00	= 0.03
<b>TOTAL AREA</b>		<b>1.12 ACRES</b>			<b>0.70801</b>
<b>C avg. = TOTAL C / TOTAL ACRES =</b>		<b>0.71 / 1.12</b>			<b>= 0.63</b>

**TIME OF CONCENTRATION IN SWALE**  
 $v = K \times S^{1/2}$   
 drain swale (ft) = 127 USE K = 1.2  
 SLOPE = 1%  
 $v = 1.2 \times (0.01)^{1/2} = 0.12$  ft/s  
 $T_c = L / 3600v = 0.2938815$  hrs = 17.64 min

**TIME OF CONCENTRATION IN PIPE**  
 $v = 3$  ft/sec average  
 pipe length (ft) = 450  
 $T_c = L / 3600v = 0.0416667$  hrs = 2.50 min  
 $T_c = 17.64 + 2.50 = 20.14$  min

**100-YEAR INTENSITY CALCULATION**  
 $I(100) = \frac{30.20 \times 0.22}{(T_c + 9.17)^{0.81}} = 5.39$  in/hr

**CHANNEL PROTECTION VOLUME CALCULATION:**  
 $V(cpcv) = 4719 \times C \times A = 3341$  cubic feet

**CHANNEL PROTECTION CONTROLLED - EXTENDED CALCULATION:**  
 $V(ED) = 6897 \times C \times A = 4883$  cubic feet

**100 YEAR PEAK INFLOW CALCULATION:**  
 $Q(100) = C \times I(100) \times A = 3.82$  cfs

**100 YEAR ALLOWABLE AGRICULTURAL RUNOFF**  
 $Q(a) = 0.2$  cfs/acre = 0.22 cfs

**VARIABLE RELEASE RATE CALCULATION:**  
 $Q_{vrr} = 1.1055 \times 0.206 \times LN(A) = 1.1055 \times 0.206 \times LN(1.2) = 1.08$  cfs/acre  
 $Q(100) = Q_{vrr} \times A = 1.21$  cfs

**STORAGE CURVE FACTOR CALCULATION:**  
 $R = 0.206 \times 0.15 \times LN(Q(100)P/Q(100)N) = 0.38$

**100-YEAR RUNOFF CALCULATION:**  
 $V(100) = 18985 \times C \times A = 13442$  CF

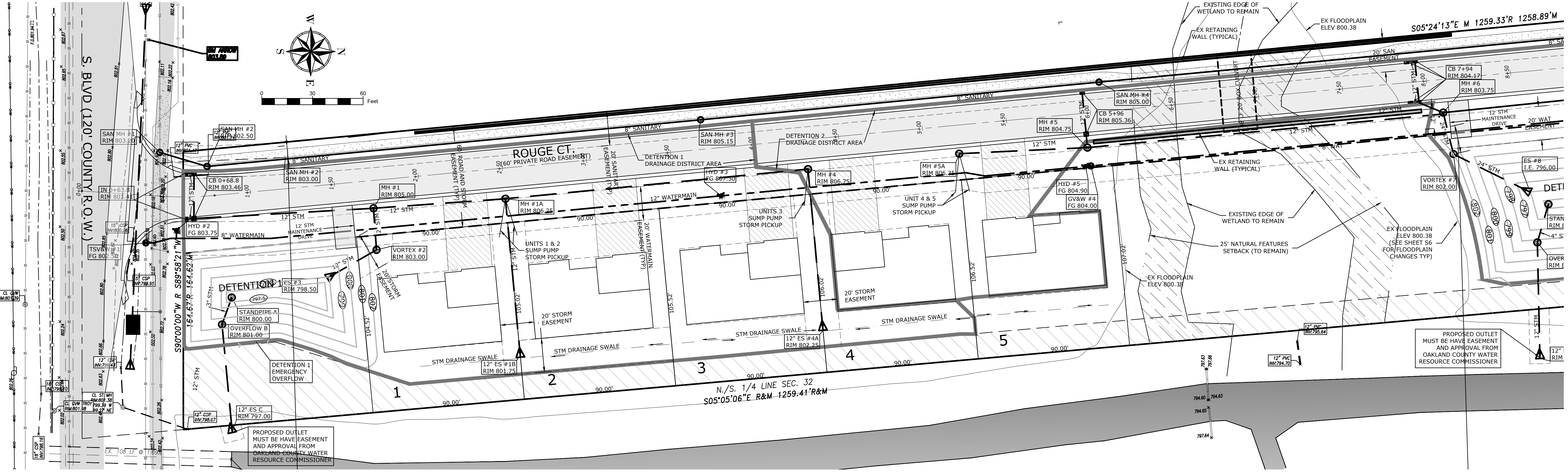
**100-YEAR STORAGE VOLUME CALCULATION:**  
 $V(100) = V(100) \times R = 5079$  CF

A MECHANICAL CHAMBER WILL BE USED IN PLACE OF A FOREBAY BASIN

DETENTION BASIN 1				
ELEV	AREA (SQ.FT.)	VOLUME (CU.FT.)	ACCUM VOLUME	
797.5	503	0	0	
798	972	368.75	368.75	
799	2143	1558	1926	
800	3627	2885	4811	
801	5418	4523	9334	
802	6059	5739	15072	

REQUIRED STORAGE MUST MEET THE FOLLOWING VOLUMES  
 $V(cpcv) = 3341$  CF @ ELEV 799.49  
 $V(ED) = 4883$  CF @ ELEV 800.02  
 $V(100) = 6621$  CF @ ELEV 800.40

PROVIDED STORAGE = 9334 CF > 6621 CF = REQUIRED STORAGE



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NOTE: AS AN AID TO THE CONTRACTOR VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD SURVEY AND AVAILABLE RECORDS, BUT THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH, AND CHARACTERISTICS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY WATER RESOURCE COMMISSIONER PRIOR TO THE START OF ANY WORK THAT MAY AFFECT ANY UTILITIES OR STRUCTURES.

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 1-800-482-7171

**SOUTH BOULEVARD UTILITY PLAN (SOUTH)**  
 WALTON BOULEVARD, CITY OF ROCHESTER HILLS  
 THREE GENERATIONS ROCHESTER HILLS SITE PLANS

**ISSUE DATES**

CITY SITE PLAN	8/15/2022
CITY SITE PLAN	9/23/2022
CITY SITE PLAN	10/21/2022
CITY SITE PLAN	12/1/2022

**DRAWN MCS**  
**DESIGNED MCS**  
**APPROVED MCP**  
 P.E. JOB No. 21-450  
 SCALE 1"=30'  
**S4**  
 SITE PLAN



**STORM WATER CALCULATIONS - STORM AREA 2**

**DETERMINATION OF 'C' FACTOR**

TOTAL AREA GOING INTO POND (GROSS & NET)	=	2.15 ACRES		
PAVING AREA (WALKS, DRIVES, ROAD)	=	0.65 ACRES	@	0.95
BUILDING AREA	=	0.36 ACRES	@	0.95
LAWN AREA	=	1.1 ACRES	@	0.25
DETENTION AND WETLAND (LOW WATER AREA)	=	0.02 ACRES	@	1.00
TOTAL AREA	=	2.15 ACRES		
C avg. = TOTAL C / TOTAL ACRES =		1.26 / 2.15	=	<b>0.59</b>

**TIME OF CONCENTRATION IN SWALE**

$v = 4.83(1/2)^{0.047}$

drain swale (ft) = 150 USE K = 1.2 SLOPE = 1%

$v = 1.2 \times (0.01)^{0.12} = 0.12$  ft/s

$T_t = L/3600v = 0.347222$  hrs = 20.83 min

**TIME OF CONCENTRATION IN PIPE**

$v = 3$  ft/sec average

pipe length (ft) = 483

$T_t = L/3600v = 0.044722$  hrs = 2.68 min

$T_c = 20.83 + 2.68 = 23.52$  min USE **20** min

**100-YEAR INTENSITY CALCULATION**

$I_{100} = \frac{30.20p^{0.22}}{(T_c + 9.17)^{0.81}} = 5.41$  in/hr

**CHANNEL PROTECTION VOLUME CALCULATION:**

$V_{cpcv} = 4719 \times C \times A = 5948$  cubic feet

**CHANNEL PROTECTION CONTROLLED - EXTENDED CALCULATION:**

$V_{VED} = 6897 \times C \times A = 8693$  cubic feet

**100 YEAR PEAK INFLOW CALCULATION:**

$Q_{100in} = C \times I_{100} \times A = 6.82$  cfs

**100 YEAR ALLOWABLE AGRICULTURAL RUNOFF**

$Q_{allow} = 0.2$  cfs/acre = 0.43 cfs

**VARIABLE RELEASE RATE CALCULATION:**

$Q_{vrr} = 1.1055 - 0.206 \ln(A) = 1.1055 - 0.206 \times \ln(2.11) = 0.95$  cfs/acre

$Q_{100p} = Q_{vrr} \times A = 2.04$  cfs

**STORAGE CURVE FACTOR CALCULATION:**

$R = 0.206 - 0.15 \times \ln(Q_{100P}/Q_{100IN}) = 0.39$

**100-YEAR RUNOFF CALCULATION:**

$V_{100R} = 18985 \times C \times A = 23927$  CF

**100-YEAR STORAGE VOLUME CALCULATION:**

$V_{100D} = V_{100R} \times R = 9263$  CF

A MECHANICAL CHAMBER WILL BE USED IN PLACE OF A FOREBAY BASIN

ELEV	AREA (SQ.FT.)	VOLUME (CU.FT.)	ACCUM VOLUME
796	980	0	0
797	2015	1498	1498
798	3348	2682	4179
799	4978	4163	8342
800	6906	5942	14284
801	9136	8021	22305

801-802 FREEBOARD

REQUIRED STORAGE MUST MEET THE FOLLOWING VOLUMES

$V_{cpcv} = 5948$  CF @ ELEV 798.42

$V_{VED} = 8693$  CF @ ELEV 799.30

$V_{100D} = 12008$  CF @ ELEV 799.72

**PROVIDED STORAGE = 22305 CF > 12,008 CF = REQUIRED STORAGE**

**HYDRANT FLOW TEST RESULT**

WATER CADD FLOW DATA ANALYSIS ON SOUTH BLVD EAST OF WALNUT BROOK DRIVE PRIOR TO THE PRV.

>110 PSI STATIC PRESSURE  
4400 GPM MAX DAY DEMAND  
MEETS REQUIRED FIRE FLOW

- FIRE DEPARTMENT NOTES:**
- A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE THROUGH KNOX COMPANY AT 222.KNOXBOX.COM (IFC 2006 SEC. 1028.2).
  - FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH THE FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 503).
  - CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.
  - OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING. OPEN BURNING FOR WARMING AND SAND AND / OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 307.6.2 & 307.6.2.3) MORTAR PERMIT CAN BE APPLIED FOR ONLINE AT WWW.ROCHESTERHILLS.ORG/FIRE IN THE "FOR YOUR BUSINESS" SECTION.
  - PROVIDE A "NO PARKING FIRE DEPARTMENT CONNECTION" SIGN OVER THE FIRE DEPARTMENT CONNECTION.
  - FDC'S SHALL NOT BE OBSTRUCTED BY LANDSCAPING, PARKING, OR ANY OTHER PERMANENT OR TEMPORARY MATERIALS OR DEVICES.
  - IF THE FIRE DEPARTMENT CONNECTION IS NOT LOCATED ON THE STREET FRONT OF THE BUILDING, A WHITE / CLEAR STROBE LIGHT SHALL BE TIED INTO THE FIRE ALARM SYSTEM AND INSTALLED OVER THE FDC.

NOTE: ALL STORM SEWERS TO MEET THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY WATER RESOURCE COMMISSIONER ENGINEERING REQUIREMENTS.

NOTE: ALL SANITARY TO MEET THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY WATER RESOURCE COMMISSIONER AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

NOTE: ALL WATERMAIN TO MEET THE CITY OF ROCHESTER HILLS AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENGINEERING REQUIREMENTS.

**SANITARY BASIS OF DESIGN**

INITIAL & ULTIMATE DESIGN

ESTIMATED INITIAL AND ULTIMATE LOAD = 9 RESIDENTIAL UNITS  
P = POPULATION = 2.44 PEOPLE/REU x 9 REU = 22 PP

INITIAL AVERAGE FLOW = 22 PP x 100 GPDPC = 0.0022 MGD = 0.00409 CFS

PEAKING FACTOR 4.0

INITIAL AND ULTIMATE PEAK DESIGN FLOW = 4.0 x 0.00409 = 0.0164 CFS

CAPACITY OF 8" SANITARY SEWER @ 0.40% = 0.75 CFS

SEWER CAPACITY = 0.75 CFS > 0.0164 CFS DESIGN FLOW

**WATERMAIN BASIS OF DESIGN**

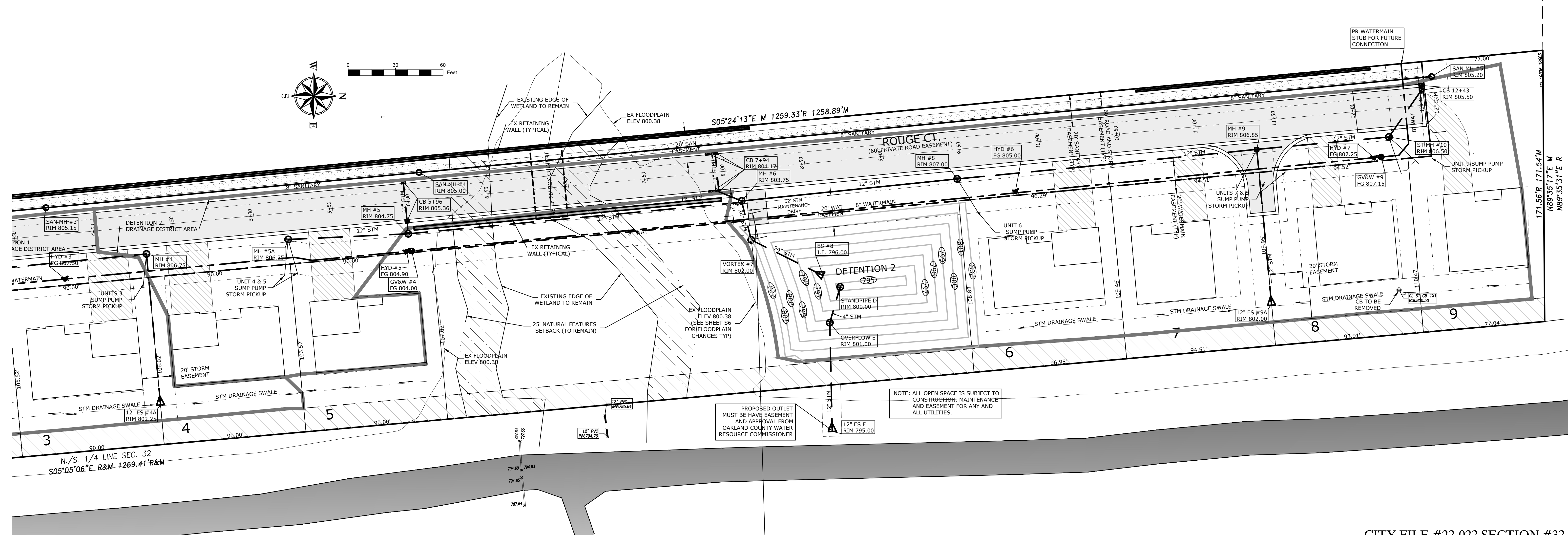
INITIAL & ULTIMATE DESIGN

ESTIMATED INITIAL AND ULTIMATE LOAD = 9 RESIDENTIAL UNITS  
P = POPULATION = 2.44 PEOPLE/REU x 9 REU = 22 PP

INITIAL AVERAGE FLOW = 22 PP x 100 GPDPC = 0.0022 MGD = 0.00409 CFS

PEAKING FACTOR = 2.5

INITIAL AND ULT PEAK DESIGN FLOW = 2.5 x 0.00409 MGD = 0.01125 MGD = 0.0102 CFS



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"Engineering A Better Michigan"

**Powell Engineering & Associates, LLC**

4700 Conoverstone Drive, White Lake, Michigan 48383  
P: 248-717-9895 info@powellengineeringllc.com

BEFORE YOU DIG  
CALL MISS DIG  
1-800-482-7171

**SOUTH BOULEVARD  
UTILITY PLAN (NORTH)**

WALTON BOULEVARD, CITY OF ROCHESTER HILLS  
THREE GENERATIONS ROCHESTER HILLS SITE PLANS

**ISSUE DATES**

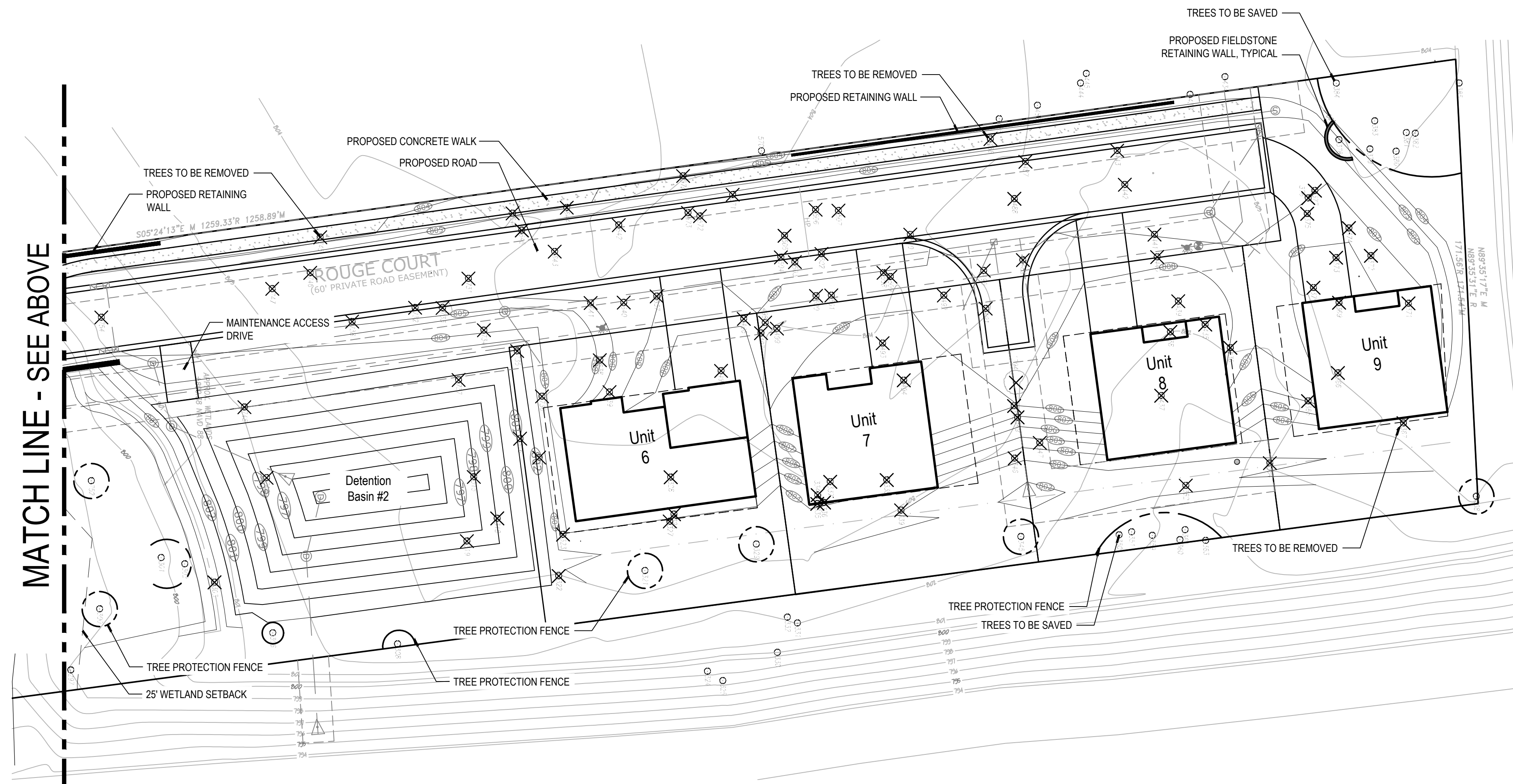
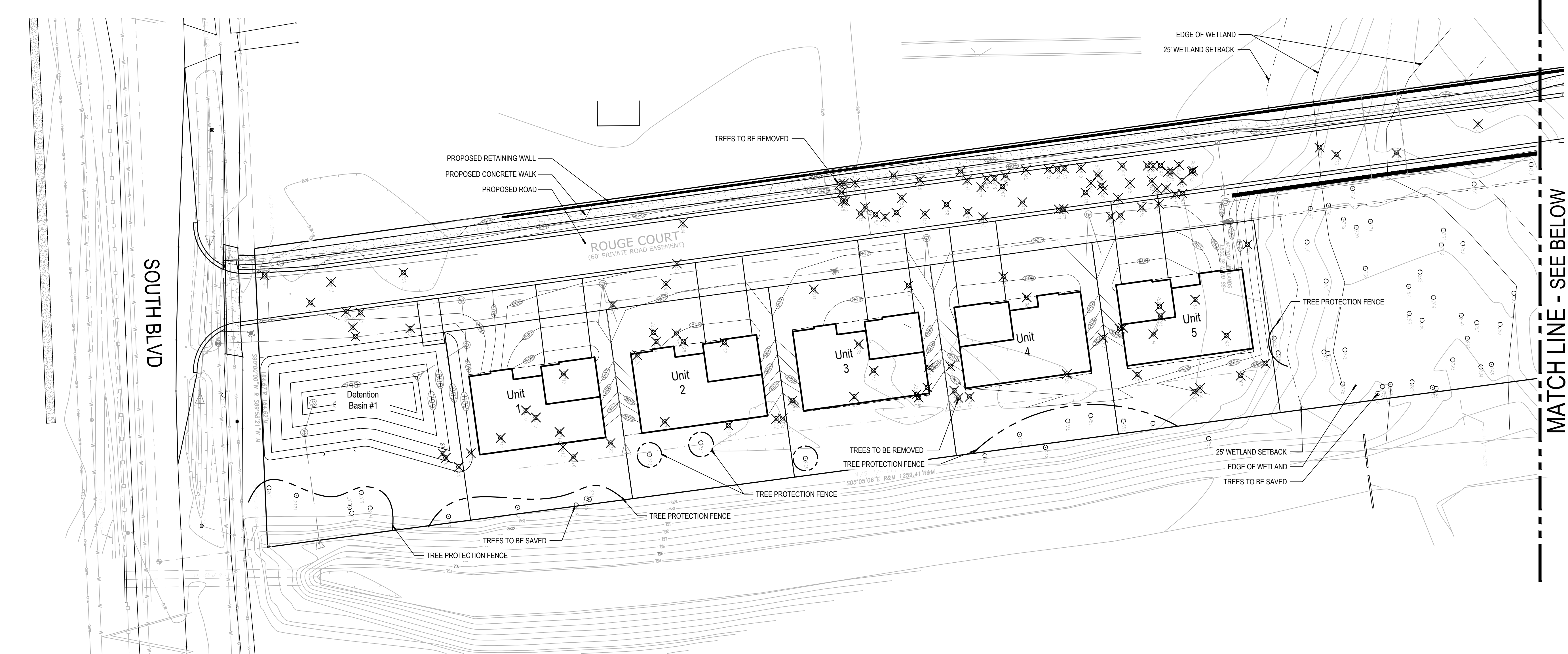
CITY SITE PLAN	8/15/2022
CITY SITE PLAN	8/22/2022
CITY SITE PLAN	10/21/2022
CITY SITE PLAN	12/1/2022

**DRAWN** MCS  
**DESIGNED** MCS  
**APPROVED** MCP  
**P.E. JOB No.** 21-450  
**SCALE** 1"=30'  
**S5**  
SITE PLAN









**Tree Protection Note**

No person may conduct any construction or development activity within the drip line of any regulated tree not approved for removal, including but not limited to land clearing, grubbing, trenching, grading, or filling, nor shall any person place solvents, building material, construction equipment, soil deposits, or other harmful materials within the drip line unless authorized by the parks and natural resources department.

During construction or development activity, persons shall not attach any device or wire to any regulated tree not approved for removal.

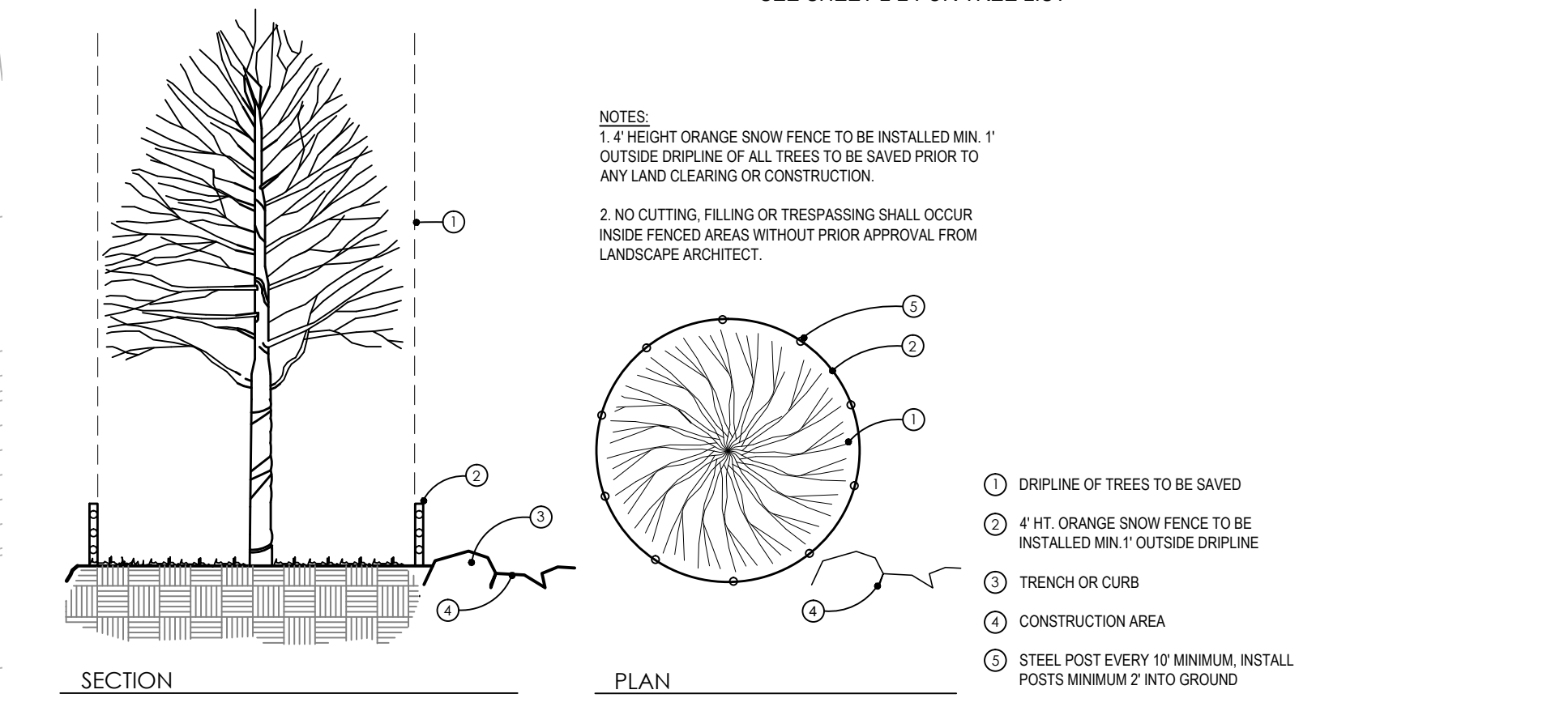
Replacement and relocated trees must be staked, fertilized, and mulched and shall be guaranteed by the tree removal permit holder to exhibit a normal growth cycle for at least one year following planting.

**Tree Mitigation Calculations**

Regulated Trees Surveyed	326
Tree Exemptions	70 (building envelop (50), poor condition (20))
Remaining Regulated Trees	256 (326-70)
Trees Required to be Saved	103 (256 x 40%)
Regulated Trees Saved	104
Percentage of Trees Saved	40.63% (104/256)
Regulated Trees Removed	140
Regulated Trees Required	120 (1 to 1 replacement ratio less 20 in poor condition*)
Specimen Trees Removed	83 (2,706*)
Specimen Trees Saved	43
Specimen Trees Credits	43 (1 - 2" tree credit per saved tree)
Specimen Trees Required	634 ((2,706 * 50% = 1,353) / 2 = 677 2" trees - 43 credits)
Total Replacements Required	754 (120+634)
Total Replacements Provided	133
Trees Paid into City Tree Fund	621

\*The trees identified as being in poor condition are in such a state of decline with some showing signs of disease, it is our belief that these trees will be dead within the next two (2) years

SEE SHEET L-2 FOR TREE LIST





06.09.2022	Preliminary Review
06.22.2022	Revision per Owner
08.25.2022	Revision per Owner
10.27.2022	Revision per City Comments
12.14.2022	Revision per City Comments

Tag No.	DBH (in.)	Common Name	Botanical Name	Condition	Specimen	Remove	Exempt	Tag No.	DBH (in.)	Common Name	Botanical Name	Condition	Landmark	Remove	Exempt	Tag No.	DBH (in.)	Common Name	Botanical Name	Condition	Landmark	Remove	Exempt	Tag No.	DBH (in.)	Common Name	Botanical Name	Condition	Landmark	Remove	Exempt
201	12	Apple	Malus spp.	Good				300	28	White Oak	Quercus alba	Good	X			494	24,26	Basswood	Tilia americana	Good	X	X	X	834	14	Norway Maple	Acer platanoides	Good		X	
202	10	Ornamental Pear	Pyrus calleryana	Good				301	14	Boxelder	Acer negundo	Poor				495	16	Shagbark Hickory	Carya ovata	Good				844	22	Northern Hackberry	Celtis occidentalis	Good	X		X
203	8	Apple	Malus spp.	Good				302	18	Elm	Ulmus americana	Poor				496	34,30,28	Basswood	Tilia americana	Good	X	X		845	16	Northern Hackberry	Celtis occidentalis	Good			X
204	15	Green Spruce	Picea pungens	Good				303	12	Elm	Ulmus americana	Poor		X	X	497	8,5	Red Maple	Acer rubrum	Good				846	14	Northern Hackberry	Celtis occidentalis	Good			X
205	10	Green Spruce	Picea pungens	Poor				306	50	White Oak	Quercus alba	Good	X			498	7	Red Maple	Acer rubrum	Good				847	20	Northern Hackberry	Celtis occidentalis	Good	X		X
206	14,13	Green Spruce	Picea pungens	Good				308	9	White Oak	Quercus alba	Good				499	18	Basswood	Tilia americana	Good	X	X		848	10	Northern Hackberry	Celtis occidentalis	Good			X
207	DEAD				X		X	313	22	Silver Maple	Acer saccharinum	Good	X			500	12	Shagbark Hickory	Carya ovata	Good				849	16	Northern Hackberry	Celtis occidentalis	Good			X
208	26	Black Walnut	Juglans nigra	Good	X			314	54	White Oak	Quercus alba	Good	X			501	42	Red Oak	Quercus rubra	Good	X	X		850	17	Northern Hackberry	Celtis occidentalis	Good			X
209	10,15,11,12	Golden Willow	Salix alba	Fair		X		315	18	White Oak	Quercus alba	Good	X	X		502	22,22,18,20	Basswood	Tilia americana	Good	X	X		851	18,16,19,18	Cottonwood	Populus deltoides	Good			X
210	14	White Oak	Quercus alba	Good		X		316	19	White Oak	Quercus alba	Good	X	X		503	28	Basswood	Tilia americana	Good	X	X		852	22,23	Cottonwood	Populus deltoides	Good			X
211	10	Elm	Ulmus americana	Good			X	317	17	White Oak	Quercus alba	Good				504	30	Red Oak	Quercus rubra	Good	X	X		853	10,8	Cottonwood	Populus deltoides	Good			X
212	14	Cottonwood	Populus deltoides	Good				318	11	Black Cherry	Prunus serotina	Poor	X		X	505	10,12	Basswood	Tilia americana	Poor			X	854	28,24,12,30	Cottonwood	Populus deltoides	Good	X		X
213	24	Elm	Ulmus americana	Good	X		X	319	8	Red Oak	Quercus rubra	Good		X		506	29,11	Red Oak	Quercus rubra	Good	X	X		855	14	Northern Hackberry	Celtis occidentalis	Good			X
214	12	Black Walnut	Juglans nigra	Good		X	X	321	20,16,28,28,29	Silver Maple	Acer saccharinum	Good	X			507	13	Basswood	Tilia americana	Good	X	X		856	6,8	Northern Hackberry	Celtis occidentalis	Good			X
215	7	Elm	Ulmus americana	Good		X	X	322	7	Apple	Malus spp.	Poor		X	X	508	18	Basswood	Tilia americana	Good	X	X		857	76	Basswood	Tilia americana	Good	X	X	X
216	8	Shagbark Hickory	Carya ovata	Good		X		323	9	Red Oak	Quercus rubra	Good		X	X	509	11	Norway Maple	Acer platanoides	Good				858	38	Silver Maple	Acer saccharinum	Good	X	X	X
217	9	Elm	Ulmus americana	Good		X		324	8	Black Cherry	Prunus serotina	Good				510	34,26,28	Basswood	Tilia americana	Good	X	X		859	10	Northern Hackberry	Celtis occidentalis	Good			X
218	19	Boxelder	Acer negundo	Poor		X	X	325	8	Red Oak	Quercus rubra	Good				511	14,7	Basswood	Tilia americana	Poor				860	21	Northern Hackberry	Celtis occidentalis	Good	X		X
219	10	Boxelder	Acer negundo	Good				326	28	Red Oak	Quercus rubra	Good	X	X	X	512	19	Silver Maple	Acer saccharinum	Good	X	X		861	18	Northern Hackberry	Celtis occidentalis	Good	X		X
220	7	Black Walnut	Juglans nigra	Good				327	15	Red Oak	Quercus rubra	Fair				513	13	Silver Maple	Acer saccharinum	Good				862	14	Northern Hackberry	Celtis occidentalis	Fair			X
221	8	Black Walnut	Juglans nigra	Good				328	7	Black Cherry	Prunus serotina	Poor	X		X	514	30,24	Elm	Ulmus americana	Good	X	X		863	14	Red Maple	Acer rubrum	Good			X
222	22	Black Walnut	Juglans nigra	Good	X		X	329	14,11	Red Oak	Quercus rubra	Poor				515	21	Basswood	Tilia americana	Good	X	X		864	6	Northern Hackberry	Celtis occidentalis	Good			X
223	32	Black Willow	Salix nigra	Poor	X			330	8	Red Oak	Quercus rubra	Good				637	18	Shagbark Hickory	Carya ovata	Good	X	X		865	6	Northern Hackberry	Celtis occidentalis	Good	X		X
224	8	Elm	Ulmus americana	Good		X	X	331	7	Elm	Ulmus americana	Good				638	17	Swamp White Oak	Quercus bicolor	Good				866	23	Northern Hackberry	Celtis occidentalis	Good	X		X
225	7,7	Elm	Ulmus americana	Good		X		332	8	Red Oak	Carya ovata	Good	X			639	8,17	Shagbark Hickory	Carya ovata	Good				867	12	Northern Hackberry	Celtis occidentalis	Good			X
226	8	Elm	Ulmus americana	Good		X		334	31	Shagbark Hickory	Carya ovata	Good	X	X		640	16	Norway Maple	Acer platanoides	Good				868	10	Boxelder	Acer negundo	Poor			X
227	8	Elm	Ulmus americana	Good		X		335	10	Shagbark Hickory	Carya ovata	Good				641	12	Shagbark Hickory	Carya ovata	Good	X	X		869	24	Northern Hackberry	Celtis occidentalis	Good	X		X
228	9	Elm	Ulmus americana	Good		X		336	10	Shagbark Hickory	Carya ovata	Good		X		642	18	Red Maple	Acer rubrum	Good	X	X		870	9	Northern Hackberry	Celtis occidentalis	Good			X
229	10,10	Scotch Pine	Pinus sylvestris	Fair		X	X	337	17,16	White Oak	Quercus alba	Good	X			643	28,28,20,10	Basswood	Tilia americana	Good	X	X		871	10	Northern Hackberry	Celtis occidentalis	Poor	X		X
230	10	Elm	Ulmus americana	Good		X		338	13	Basswood	Tilia americana	Good		X		644	51	Basswood	Quercus rubra	Good	X	X		872	22	Northern Hackberry	Celtis occidentalis	Fair	X		X
231	18	Black Walnut	Juglans nigra	Good				339	29	Basswood	Tilia americana	Good	X	X		645	7	Red Maple	Acer rubrum	Poor	X	X	X	873	15	Northern Hackberry	Celtis occidentalis	Good	X		X
232	28	Cottonwood	Populus deltoides	Good	X		X	345	9	Elm	Ulmus americana	Good				646	47	Red Oak	Quercus rubra	Good	X	X		874	8	Northern Hackberry	Celtis occidentalis	Good	X		X
233	16	Elm	Ulmus americana	Good		X		346	14	Red Oak	Quercus rubra	Good		X	X	731	14	Shagbark Hickory	Carya ovata	Good				875	17	Northern Hackberry	Celtis occidentalis	Good	X		X
234	9	Elm	Ulmus americana	Good		X		347	9	Red Oak	Quercus rubra	Good		X	X	732	19	Shagbark Hickory	Carya ovata	Good	X	X		876	7	Northern Hackberry	Celtis occidentalis	Good	X		X
235	6	Cottonwood	Populus deltoides	Good				348	11	Norway Maple	Acer platanoides	Good	X	X		733	14,18,20	Basswood	Tilia americana	Good	X	X		877	10	Northern Hackberry	Celtis occidentalis	Good	X		X
236	12	Elm	Ulmus americana	Fair		X	X	349	59	Silver Maple	Acer saccharinum	Good	X	X	X	734	19	White Oak	Quercus alba	Good	X	X		878	20	Northern Hackberry	Celtis occidentalis	Good	X		X
237	11	Elm	Ulmus americana	Poor		X	X	350	10	Elm	Ulmus americana	Good				735	14	Norway Maple	Acer platanoides	Good				879	28	Northern Hackberry	Celtis occidentalis	Good	X		X
238	38	Red Maple	Acer rubrum	Good	X	X	X	351	7	Elm	Ulmus americana	Good				736	75	Red Oak	Quercus rubra	Good	X	X		880	6	Red Maple	Acer rubrum	Good			X
239	14	Cottonwood	Populus deltoides	Good		X	X	359	12	Cottonwood	Populus deltoides	Good				737	6	Black Walnut	Juglans nigra	Good	X	X		881	16	Northern Hackberry	Celtis occidentalis	Good	X		X
240	19	Red Maple	Acer rubrum	Good		X	X	360	12	Cottonwood	Populus deltoides	Good				738	29	Norway Maple	Acer platanoides	Good	X	X		882	20	Northern Hackberry	Celtis occidentalis	Good	X		X
241	39	Cottonwood	Populus deltoides	Good	X		X	361	18	Cottonwood	Populus deltoides	Good				745	16	Shagbark Hickory	Carya ovata	Good				883	7	Elm	Ulmus americana	Good	X		X
242	9	Elm	Ulmus americana	Good		X		362	18	Cottonwood	Populus deltoides	Good		X		746	8	Norway Maple	Acer platanoides	Good				884	32	Red Maple	Acer rubrum	Good	X		X
243	6	Elm	Ulmus americana	Poor		X	X	363	10	Cottonwood	Populus deltoides	Good				747	30	Silver Maple	Acer saccharinum	Good	X	X		885	12	Northern Hackberry	Celtis occidentalis	Good	X		X
244	9	Red Maple	Acer rubrum	Good		X		364	32	White Oak	Quercus alba	Good	X	X		748	82	Silver Maple	Acer saccharinum	Good	X	X		886	9	Northern Hackberry	Celtis occidentalis	Good	X		X
245	29	Cottonwood	Populus deltoides	Good	X	X		365	26	White Oak	Quercus alba	Good	X	X	X	749	32	Basswood	Tilia americana	Good	X	X		888	6	Northern Hackberry	Celtis occidentalis	Good	X		X
246	38	Cottonwood	Populus deltoides	Good	X	X		366	36	White Oak	Quercus alba	Good	X	X	X	752	32,22,20,24	Silver Maple	Acer saccharinum	Fair	X	X		889	12	Northern Hackberry	Celtis occidentalis	Good	X		X
247	6,9	Black Walnut	Juglans nigra	Fair				367	28	White Oak	Quercus alba	Poor	X	X	X	753	84	Silver Maple	Acer saccharinum	Good	X			891	10	Northern Hackberry	Celtis occidentalis	Good	X		X
248	8	Elm	Ulmus americana	Good				368	86	White Oak	Quercus alba	Fair				754	32	Red Oak	Quercus rubra	Good	X	X		892	26	Northern Hackberry	Celtis occidentalis	Good	X		X
249	16	Black Walnut	Juglans nigra	Good				369	59	Red Oak	Quercus rubra	Good	X	X	X	759	14	Northern Hackberry	Celtis occidentalis	Good			X	893	12	Northern Hackberry	Celtis occidentalis	Good	X		X
250	9	Boxelder	Acer negundo	Fair				370	13	Norway Maple	Acer platanoides	Good	X	X		760	72	Silver Maple	Acer saccharinum	Fair	X			894	32	Northern Hackberry	Celtis occidentalis	Fair	X		X
251	9	Boxelder	Acer negundo	Good				371	22	White Oak	Quercus alba	Good	X	X	X	761	52	Silver Maple	Acer saccharinum	Good	X			895	18	Northern Hackberry	Celtis occidentalis	Good	X		X
252	19	Elm	Ulmus americana	Good	X		X	372	26	Red Oak	Quercus rubra	Good	X	X	X	762	36	Silver Maple	Acer saccharinum	Good	X	X		896	7	Northern Hackberry	Celtis occidentalis	Good	X		X
253	10	Elm	Ulmus americana	Good				373	9	Black Cherry	Prunus serotina	Fair				763	42	Silver Maple	Acer saccharinum	Good	X			897	15	Northern Hackberry	Celtis occidentalis	Good	X		X
254	12	Boxelder	Acer negundo	Poor		X	X	374	62	Red Oak	Quercus rubra	Good	X	X	X	764	18	Red Maple	Acer rubrum	Good	X			898	26	Northern Hackberry	Celtis occidentalis	Fair	X		X
255	11	Elm	Ulmus americana	Fair				375	10	Elm	Ulmus americana	Good				765	94	Silver Maple	Acer saccharinum	Good	X			899	7	Northern Hackberry	Celtis occidentalis	Good	X		X
256	7	Elm	Ulmus americana	Poor				376	8	Elm	Ulmus americana	Fair			X	766	11	Norway Maple	Acer platanoides	Good				900	13	Northern Hackberry</					



06.09.2022	Preliminary Review
06.22.2022	Revision per Owner
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12.14.2022	Revision per City Comments

**South Oaks**  
W. South Boulevard  
Rochester Hills, Michigan

South Oaks, LLC  
1400 E. Michigan Ave, Suite G  
Saline, MI 48176

**LANDSCAPE PLAN**

**NOT FOR CONSTRUCTION**



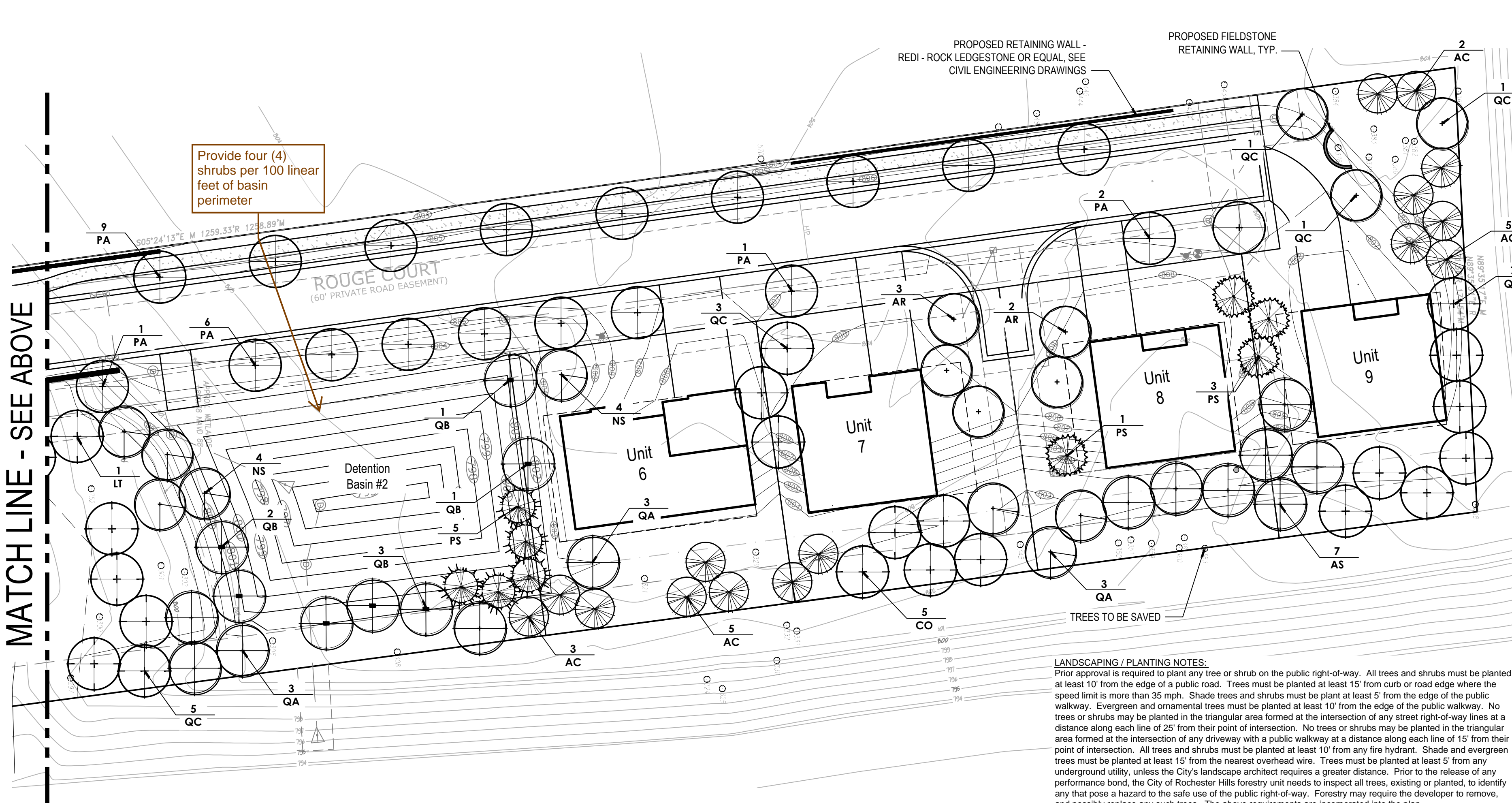
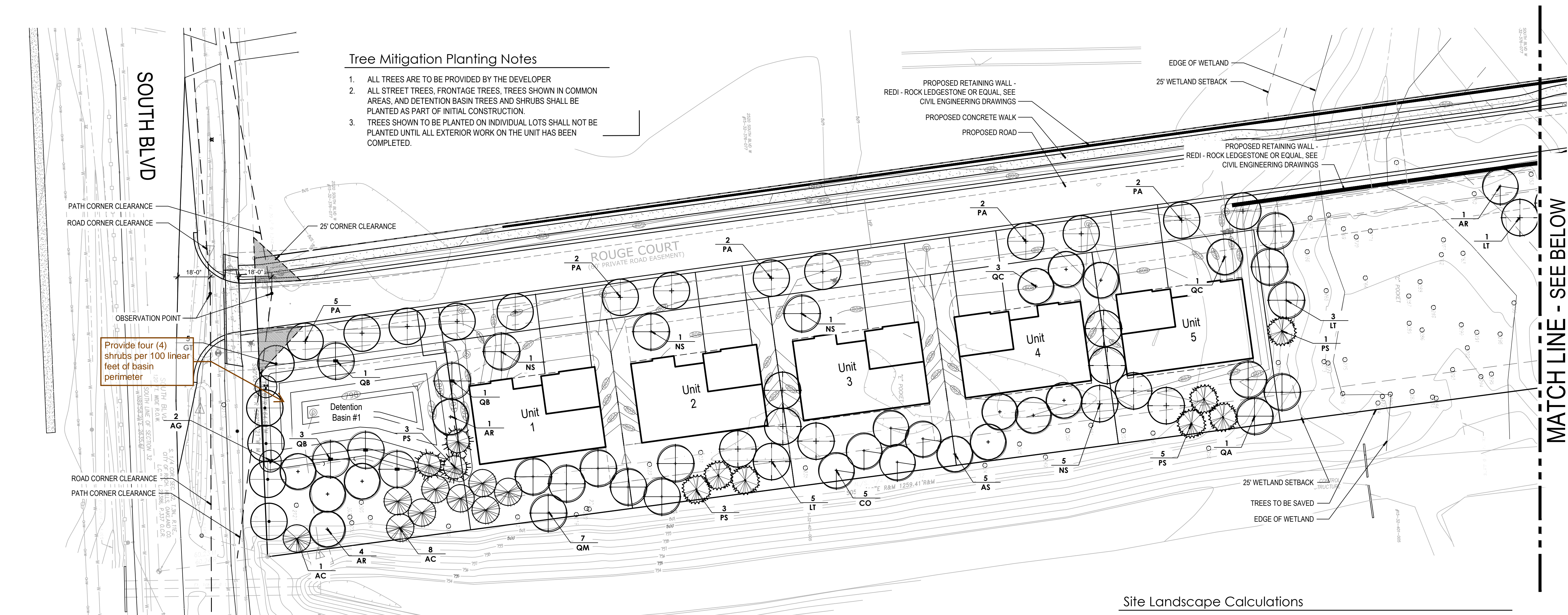
Drawn:	JG
Checked:	JG
Date:	05.2022
Scale:	1" = 30'-0"

22.012

**L-3**

**Tree Mitigation Planting Notes**

1. ALL TREES ARE TO BE PROVIDED BY THE DEVELOPER
2. ALL STREET TREES, FRONTAGE TREES, TREES SHOWN IN COMMON AREAS, AND DETENTION BASIN TREES AND SHRUBS SHALL BE PLANTED AS PART OF INITIAL CONSTRUCTION.
3. TREES SHOWN TO BE PLANTED ON INDIVIDUAL LOTS SHALL NOT BE PLANTED UNTIL ALL EXTERIOR WORK ON THE UNIT HAS BEEN COMPLETED.



**Site Landscape Calculations**

<b>ROW Frontage</b>			
Street Frontage (South Blvd.)	164.62 LF		
Deciduous Trees Required	5 Trees (164.62' / 35')		
Deciduous Trees Provided	5 Trees		
Ornamental Trees Required	3 Trees (164.62' / 60')		
Ornamental Trees Provided	3 Trees		
<b>Street Trees - Internal Road</b>			
Road Length	1,138 LF		
Deciduous Trees Required	32 Trees (1,138' / 35')		
Deciduous Trees Provided	32 Trees		
<b>Detention Basin Landscape</b>			
Basin #1 Perimeter	312 LF		
Deciduous Trees Required	5 (312' / 100')*1.5		
Deciduous Trees Provided	5		
Evergreen Trees Required	3 (312' / 100')		
Evergreen Trees Provided	3		
Shrubs Required	13 (312' / 100')*4		
Shrubs Provided	13		
Basin #2 Perimeter	447 LF		
Deciduous Trees Required	7 (447' / 100')*1.5		
Deciduous Trees Provided	7		
Evergreen Trees Required	5 (447' / 100')		
Evergreen Trees Provided	5		
Shrubs Required	18 (447' / 100')*4		
Shrubs Provided	18		

NOTE: See Sheet L-4 for Plant Schedule & Detention Basin Shrub Plantings & Seeding Plans

**Maintenance Notes**

The owner of the property shall be responsible for all maintenance of site landscaping, as follows:

- Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse.
- Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.
- All dead, damaged, or diseased plant material shall be removed immediately and replaced within six (6) months after it dies or in the next planting season, whichever occurs first. For purposes of this section, the planting season for deciduous plants shall be between March 1 and June 1 and from October 1 until the prepared soil becomes frozen. The planting season for evergreen plants shall be between March 1 and June 1. Plant material installed to replace dead or diseased material shall be as close as practical to the size of the material it is intended to replace. The City may notify property owners of the need to replace dead, damaged, or diseased material.
- The approved landscape plan shall be considered a permanent record and integral part of the Site Plan Approval. Unless otherwise approved in accordance with the aforementioned procedures, any revisions to or removal of plant materials, or non-compliance with the maintenance requirements of this Section 138-12.109 will place the parcel in non-conformity with the approved landscape plan and be a violation of this ordinance.
- If protected trees are damaged, a fine shall be issued on an inch-by-inch basis at a monetary rate as defined by the Forestry Department.

To assist in maintaining plant materials in a healthy condition, all landscaped areas (including lawns) shall be provided with an automatic, underground, or drip irrigation system, subject to the following:

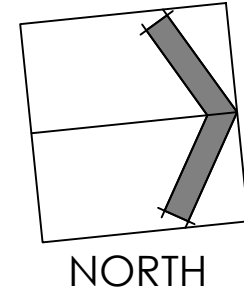
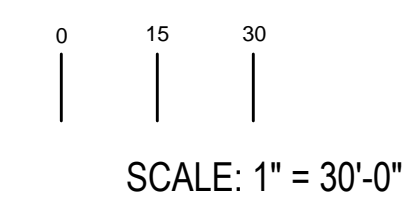
- The Planning Department may approve an alternative form of irrigation for a particular site, or may waive this requirement upon determining that underground irrigation is not necessary for the type of proposed plant materials.
  - All automatic irrigation systems shall be designed to minimize water usage, and shall be shut off during water emergencies, periods of protracted rainfall, or water rationing periods.
  - The irrigation requirement may be waived by the reviewing authority if the project incorporates landscaping that will contribute points towards LEED certification or an equivalent rating system.
- Whenever a landscape planting screen or other plantings are required under this ordinance, such plantings shall be installed according to accepted good planting procedures and in a sound, workmanlike manner. All plant material shall meet current standards of the American Association of Nurserymen and approved by the American National Standards Institute, Inc. (ANSI 260.1, 1996).
- All plant material shall be true to name in conformance to the current edition of Standardized Plant Names established by the American Joint Committee on Horticultural Nomenclature, or other source accepted by the City.
  - All plant material shall be nursery grown in a northern climate, hardy to the climate of Michigan; appropriate for the soil, climatic and environmental conditions; and resistant to disease and insect attack.
  - A minimum four (4) inches of topsoil shall be provided for all lawn areas, ground covers, and planting beds.
  - Artificial plant material is prohibited and shall not be used to meet the requirements of this Article.

**ADDITIONAL NOTES:**

- Watering of landscape areas shall only occur between the hours of 12am and 5am
- Prior to the release of the performance bond, the City of Rochester Hills must inspect all landscape plantings
- All lawn and landscape areas, including rights of way shall be fully irrigated and compliant with Section 138-12.105
- Any plant material that is designated to be maintained that dies or is damaged during or as a result of construction shall be replaced in kind with like species and sizes

**LANDSCAPING / PLANTING NOTES:**

Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted at least 10' from the edge of a public road. Trees must be planted at least 15' from curb or road edge where the speed limit is more than 35 mph. Shade trees and shrubs must be planted at least 5' from the edge of the public walkway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public walkway. No trees or shrubs may be planted in the triangular area formed at the intersection of any street right-of-way lines at a distance along each line of 25' from their point of intersection. No trees or shrubs may be planted in the triangular area formed at the intersection of any driveway with a public walkway at a distance along each line of 15' from their point of intersection. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be planted at least 15' from the nearest overhead wire. Trees must be planted at least 5' from any underground utility, unless the City's landscape architect requires a greater distance. Prior to the release of any performance bond, the City of Rochester Hills forestry unit needs to inspect all trees, existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove, and possibly replace any such trees. The above requirements are incorporated into the plan.











FIRE DEPARTMENT  
Sean Canto, Fire Chief

From: Vince Foisy  
To: Planning Dept.  
Date: January 5, 2023  
Re: South Oaks Condos - Section #31 - Review #2

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## APPROVED

The street names submitted on the drawings received from Planning on 01/5/2023 have been reviewed as follows:

The following name(s) is/are Approved:

Prefi x	Street Name	Suffi x
	Rouge	CT

The following name(s) is/are Not Approved:

Prefi x	Street Name	Suffi x

If you have any further questions please contact me at 248.841.2709

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VINCENT B. FOISY  
Communication Systems Administrator

cc: File  
h:\data\



# SITE PLAN.pdf Markup Summary

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## Building Department (2)

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Mark Artinian 248-841-2446  
ArtinianM@RochesterHills.org

**Subject:** Building Department  
**Author:** Mark Artinian  
**Date:** 1/2/2023 2:09:37 PM  
**Status:**

Mark Artinian 248-841-2446  
ArtinianM@RochesterHills.org

Yes

**Subject:** Building Department  
**Author:** Mark Artinian  
**Date:** 1/2/2023 2:10:50 PM  
**Status:**

Yes

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## Engineering Department (1)

---

Jason Boughton 248-841-2440  
BoughtonJ@RochesterHills.org

**Subject:** Engineering Department  
**Author:** Jason Boughton  
**Date:** 12/19/2022 12:12:04 PM  
**Status:**

---

## Fire Department (1)

---

Lt. Walter Murphy 248-841-0710  
MurphyW@RochesterHills.org

**Subject:** Fire Department  
**Author:** Lieutenant W. Murphy  
**Date:** 12/22/2022 8:31:45 AM  
**Status:**

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## Group (1)

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**Subject:** Group  
**Author:** C. McLeod  
**Date:** 12/20/2022 3:31:30 PM  
**Status:**

Received  
12/15/2022

City of Rochester Hills Planning & Economic  
Development

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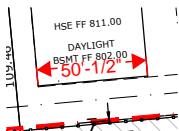
## Length Measurement (2)

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**Subject:** Length Measurement  
**Author:** Lieutenant W. Murphy  
**Date:** 12/22/2022 8:21:31 AM  
**Status:**

321'-6 3/4"



**Subject:** Length Measurement  
**Author:** C. McLeod  
**Date:** 1/5/2023 8:46:05 AM  
**Status:**

50'-1/2"

---

## Natural Resources (1)

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Matt Einheuser 248-841-2551  
EinheuserM@RochesterHills.org

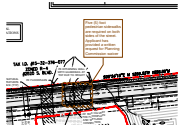
**Subject:** Natural Resources  
**Author:** Matt Einheuser  
**Date:** 1/2/2023 2:19:19 PM  
**Status:**



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## Planning Department (6)

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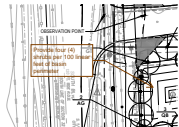
**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:19:26 AM  
**Status:**

Five (5) foot pedestrian sidewalks are required on both sides of the street. Applicant has provided a written request for Planning Commission waiver



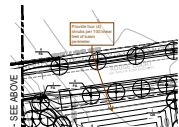
**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:23:09 AM  
**Status:**

Applicant has submitted a request to modify the required twenty five (25) foot natural features setback.



**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:53:01 AM  
**Status:**

Provide four (4) shrubs per 100 linear feet of basin perimeter



**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:53:15 AM  
**Status:**

Provide four (4) shrubs per 100 linear feet of basin perimeter



**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:53:40 AM  
**Status:**

Subject to comments



**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 1/5/2023 8:54:13 AM  
**Status:**

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## Site Plan Review (1)

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**Subject:** Site Plan Review  
**Author:** macdonaldj  
**Date:** 12/15/2022 10:12:52 AM  
**Status:**

---

## Traffic (7)

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**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 3:26:32 PM  
**Status:**

100'-0"



**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 3:56:45 PM  
**Status:**

Show spillway detail.



**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 3:58:43 PM  
**Status:**

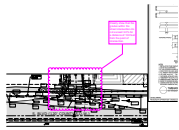
Provide a legend showing what the different hatchings are.





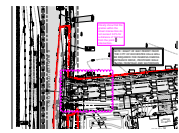
**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 4:05:16 PM  
**Status:**

Show the Approach Detail at a larger scale and at least to the 1+00 stationing point



**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 4:03:54 PM  
**Status:**

Clearly show that the grades within the street intersection do not exceed 3.0% for a distance of 100 feet from the point of intersection.



**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 4:10:15 PM  
**Status:**

Clearly show that the grades within the street intersection do not exceed 3.0% for a distance of 100 feet from the point of intersection.



**Subject:** Traffic  
**Author:** Keith  
**Date:** 12/15/2022 4:21:42 PM  
**Status:**

Clearly show that the grades within the street intersection do not exceed 3.0% for a distance of 100 feet from the point of intersection.