

PRELIMINARY SITE PLANS

PLATT ROAD TOWNHOMES

3680, 3696, 3746, 3788 PLATT ROAD
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

COMMUNITY ANALYSIS:

- THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL SCHOOLS.
- THE SURROUNDING USES CONSIST OF ST. PAUL MISSIONARY BAPTIST CHURCH (NORTH), CITY STREET/PLATT (EAST), THE SWIFT RUN DRAINAGE DISTRICT (WEST), AND A VACANT LOT (SOUTH). THESE USES ARE NOT EXPECTED TO BE NEGATIVELY IMPACTED BY THIS DEVELOPMENT.
- THE SITE WILL BE SCREENED FROM THE SURROUNDING USES BY LANDSCAPING AND EXISTING TREES, MITIGATING IMPACTS ON THE RESIDENTS.
- THE SITE IS CURRENTLY VACANT, CONSISTING OF PERIMETER TREES, GRASS AND SCRUB BRUSH. A MAJORITY OF THE SITE IS VOID OF NATURAL FEATURES. TEN LANDMARK TREES EXIST ON THE SITE, OF WHICH SIX WILL BE REMOVED AND REPLACED PER MITIGATION REQUIREMENTS. THE SITE WILL NOT CAUSE ANY ADVERSE IMPACTS TO AIR AND WATER QUALITY.
- THERE ARE NO KNOWN HISTORIC SITES ON THE PROPERTIES.
- THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL TRAFFIC. USING ITE TRIP GENERATION METHODS, THE AVERAGE VEHICLE TRIP GENERATION PER DWELLING UNIT IS CALCULATED AS 0.51 FOR MULTIFAMILY HOUSING (LOW-RISE) AND 0.40 FOR MULTIFAMILY HOUSING (MID-RISE). THE DEVELOPMENT MAY BE ALL OF EITHER OF THESE USES OR A MIXTURE OF THE TWO. HOWEVER, SINCE A TRANSPORTATION IMPACT ANALYSIS IS REQUIRED ONLY IF A PROPOSED DEVELOPMENT WILL GENERATE THREE PEAK HOUR TRIPS PER DWELLING UNIT ONE IS NOT REQUIRED FOR THIS PROJECT.
- ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALK IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.

SITE ANALYSIS:

- THE SITE IS CURRENTLY VACANT.
- SITE CONDITIONS:**
 - SOIL TYPES ON SITE ARE CONOVER LOAM AND MIAMI LOAM PER THE WASHTENAW COUNTY SOIL SURVEY. A GEOTECHNICAL INVESTIGATION PERFORMED IN 2004 REPORTED PRIMARILY CLAY AND SILTY CLAY BELOW THE OVERLYING TOPSOIL, WITH ISOLATED AREAS OF SAND LAYERS. INFILTRATION TESTING PERFORMED IN 2015 REVEALED SIMILAR RESULTS, WITH NO INDICATION OF SOIL SUITABILITY FOR STORM WATER INFILTRATION.
 - SITE VEGETATION CONSISTS PRIMARILY OF SCRUB BRUSH AND GRASSES OVER THE MAJORITY OF THE SITE, WITH TREES LOCATED AROUND THE PERIMETER, INCLUDING A STAND OF MATURE SPRUCE AND PINE TREES ALONG THE WEST BOUNDARY OF THE SITE.
 - REFER TO SHEETS P-2 AND P-2.1, "TOPOGRAPHIC SURVEY" FOR SITE TOPOGRAPHY.
- SITE NATURAL FEATURES**
 - THERE IS NO KNOWN ENDANGERED SPECIES HABITAT ON SITE.
 - THE 100-YEAR FLOOD PLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN PARTIALLY ENCROACHES ON THE WEST EDGE OF THE PROPERTY.
 - TEN LANDMARK TREES EXIST ON THE SITE. REFER TO SHEETS L-1, L-2 AND L-3 FOR MORE INFORMATION.
 - NO STEEP SLOPES EXIST ON THE SITE.
 - THERE ARE NO WATERCOURSES ON THE PROPERTY.
 - THERE ARE THREE DISTINCT WETLANDS ON THE PROPERTY, ONE IN THE CENTER OF THE SITE, ONE ON THE NORTHERN BOUNDARY OF THE SITE, AND ONE ALONG THE WEST EDGE OF THE SITE CORRESPONDING TO THE SWIFT RUN DRAIN FLOODPLAIN.
 - THERE ARE NO WOODLANDS ON THE PROPERTY.
- SITE NATURAL FEATURES ALTERNATIVES ANALYSIS**
 - AN INITIAL MORE DENSE CONCEPT INCLUDED 55 UNITS, 12 MORE THAN THE CURRENT DESIGN. THIS CONCEPT WOULD HAVE REQUIRED AN EXPANSION OF THE LIMITS OF GRADING FOR THE SITE, MORE TREE REMOVAL AND MITIGATION FOR IMPACTS TO THE FLOODPLAIN. ADDITIONALLY, THE INITIAL CONCEPT DID NOT INCLUDE THE ADDITIONAL TEN FOOT BUFFER ABOVE AND BEYOND THE 25 FOOT WETLAND BUFFER, AS IS CURRENTLY DESIGNED.
- THERE ARE NO EXISTING STRUCTURES ON THE SITE.
- THE SITE WILL BE ACCESSED VIA TWO PROPOSED DRIVEWAYS ON PLATT ROAD. THE SITE SIDEWALKS WILL CONNECT TO AN EXISTING PUBLIC WALK ON PLATT ROAD AND WILL CONNECT TO ALL LOTS. ALL SIDEWALKS PROPOSED SHALL MEET ALL REQUIREMENTS AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
- PUBLIC UTILITIES**
 - PUBLIC WATER MAIN WILL BE EXTENDED THROUGH THE SITE, CONNECTING TO THE EXISTING MAIN WITHIN PLATT ROAD AT TWO SEPARATE LOCATIONS TO CREATE A LOOP. 40" WIDE WATER MAIN EASEMENTS WILL BE PROVIDED ON SITE.
 - PUBLIC SANITARY SEWER WILL CONNECT TO THE EXISTING SANITARY SEWER ON PLATT ROAD. 30" SANITARY SEWER EASEMENTS WILL BE PROVIDED ON SITE.
- THE SITE CURRENTLY DRAINS UN-DETAINED VIA SHEET FLOW TO THE PLATT ROAD RIGHT-OF-WAY STORM SEWER SYSTEM AND TO THE SWIFT RUN DRAIN. THE PROPOSED DEVELOPMENT INCLUDES TWO NEW DETENTION BASINS WITH A MECHANICAL SEDIMENT REMOVAL STRUCTURES. A NEW ON-SITE ENCLOSED STORM SEWER SYSTEM DESIGNED PER THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER STANDARDS IS ALSO INCLUDED. THE DETENTION BASINS WILL CAPTURE STORM WATER RUNOFF FROM EXISTING ON-SITE TRIBUTARY DRAINAGE AREAS. THE DETENTION BASINS WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM IN THE PLATT ROAD RIGHT-OF-WAY AND THE SWIFT RUN DRAIN AT A LOWER PEAK FLOW RATE THAN CURRENTLY EXISTS.
- SITE LIGHTING WILL BE PROVIDED BY BUILDING MOUNTED LIGHTS ON EACH UNIT.**

THE CONSTRUCTION COVERED BY THESE PLANS SHALL BE IN COMPLETE CONFORMANCE WITH THE CITY OF ANN ARBOR STANDARDS.

DEVELOPMENT PROGRAM

THE PROPOSED PROJECT IS LOCATED ON ONE PARCEL OF CURRENTLY VACANT LAND ZONED R3, TOWNHOUSE DWELLING. THE DEVELOPMENT WILL CONSIST OF 78 THREE-STORY TOWNHOUSE BUILDINGS RANGING IN FLOOR AREAS. EACH UNIT WILL HAVE A PRIVATE GARAGE AND ENTRANCE.

THE DEVELOPMENT WILL BE ACCESSED VIA TWO DRIVE OPENINGS FROM PLATT ROAD AND INCLUDES 78 PRIVATE GARAGE SPACES (PROVIDING 78 CLASS 'A' BIKE PARKING SPACES).

IN ALL, THE PROPOSED DEVELOPMENT CONSISTS OF 78 TOWNHOUSE UNITS.

SITE DENSITY WILL BE 9.58 UNITS/ACRE (78 UNITS/8.14 ACRES).

PROBABLE SITE CONSTRUCTION COST = \$5,750,000

COMPARISON CHART OF REQUIREMENTS AND PROPOSED CONDITIONS:

- ZONING CLASSIFICATION:** R3 - TOWNHOUSE DWELLING
ADJACENT ZONING: NORTH - R1C, SOUTH - R1C, EAST - R3, WEST - PL
- LOT AREA:** 8.14 ACRES (354,512 SQ.FT.) NET AND GROSS
- TOTAL AREA OF ALL FLOORS:**
PROPOSED USE: 78 TOWNHOUSE DWELLING UNITS (D.U.)

| LOT INFORMATION: | REQUIRED: | PROPOSED: |
|-------------------|-------------------|--------------------------|
| MAXIMUM DENSITY: | 10 D.U./ACRE | 9.58 D.U./ACRE (78/8.14) |
| MINIMUM LOT AREA: | 4,300 SF PER D.U. | |
| GROSS LOT AREA: | 21,780 SF MIN. | |
| GROSS LOT WIDTH: | 120 FT. MIN. | |

- OPEN SPACE:**
MINIMUM ACTIVE OPEN SPACE
MINIMUM OPEN SPACE

| REQUIRED: | PROPOSED: |
|-----------------|--------------------------------|
| 300 SF PER D.U. | 1,540 SF PER D.U. |
| 65% OF LOT AREA | 120,142 SF / 78 DU = 1,540 73% |

- SETBACK:**
FRONT
SIDE
REAR

| REQUIRED: | PROPOSED: |
|-------------------|---------------|
| 15' MIN./40' MAX. | 16.6' |
| 20' MIN. | 49.1', 110.5' |
| 30' MIN. | 34.7' |

- HEIGHTS AND STORIES**

| BUILDING: | REQUIRED: | PROPOSED: |
|-----------|-----------|--------------------------------|
| HEIGHT | 35' MAX. | 31'-9", 31'-11" MIDPT. OF ROOF |
| SPACING | 20' MIN. | |

- BICYCLE PARKING:** 1 PER 5 D.U.

SITE SOILS INFORMATION:
ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR WASHTENAW COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:

- NoB - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES
- Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES

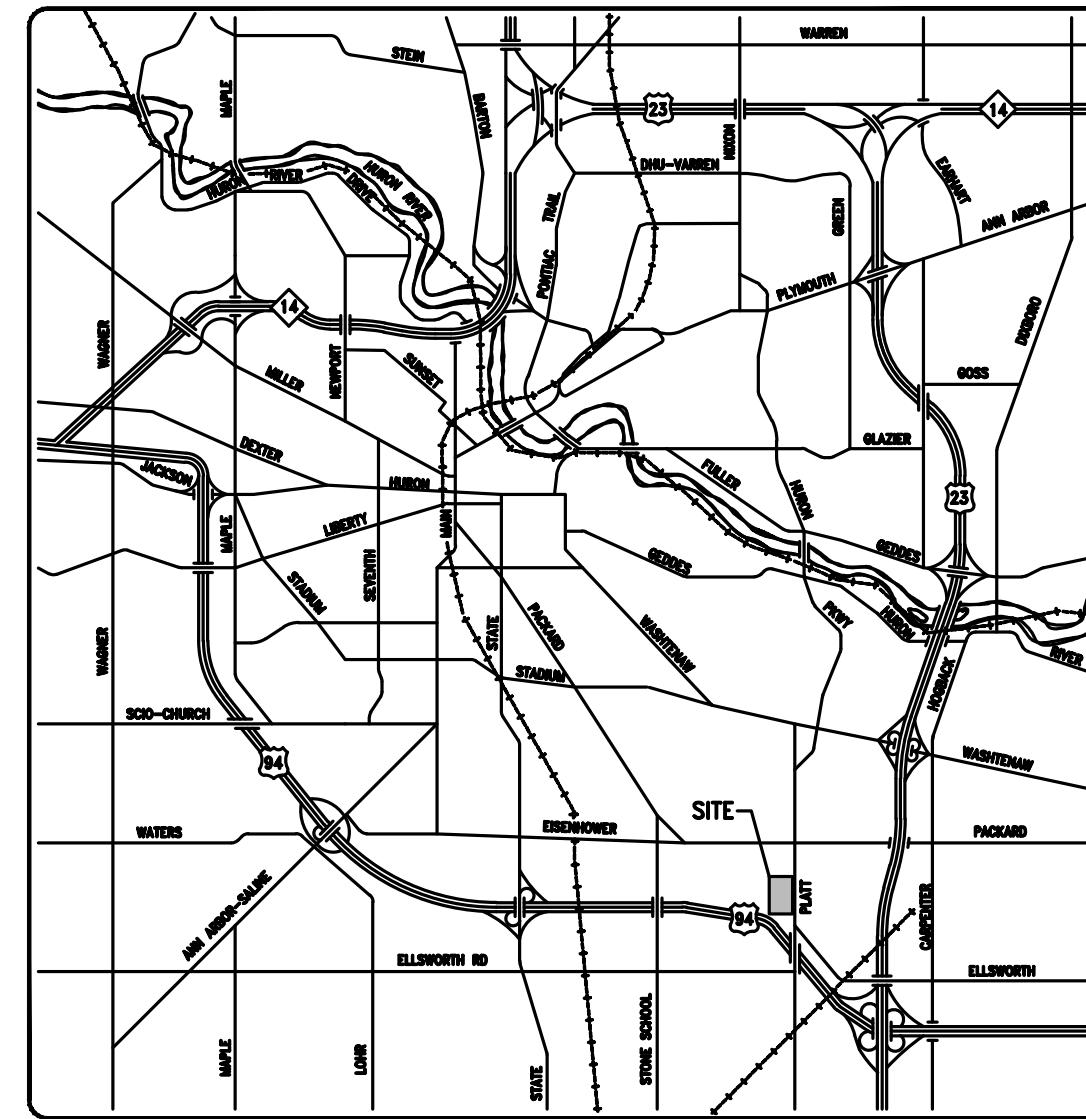
LEGAL DESCRIPTION:
(LEGAL DESCRIPTION PER WASHTENAW COUNTY)

3680 PLATT ROAD
COM AT TH E 1/4 POST OF SEC TH S 42 RDS IN THE E LINE OF SEC FOR A PL OF BEG TH W 80 RDS TH S 15 RDS IN W LINE OF E 1/2 OF SE 1/4 TH E 80 RDS TH N 15 RDS IN THE E LINE OF SEC TO THE PL OF BEG EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMM BEING A PART OF E 1/2 OF SE 1/4 SEC 10 T3S R6E

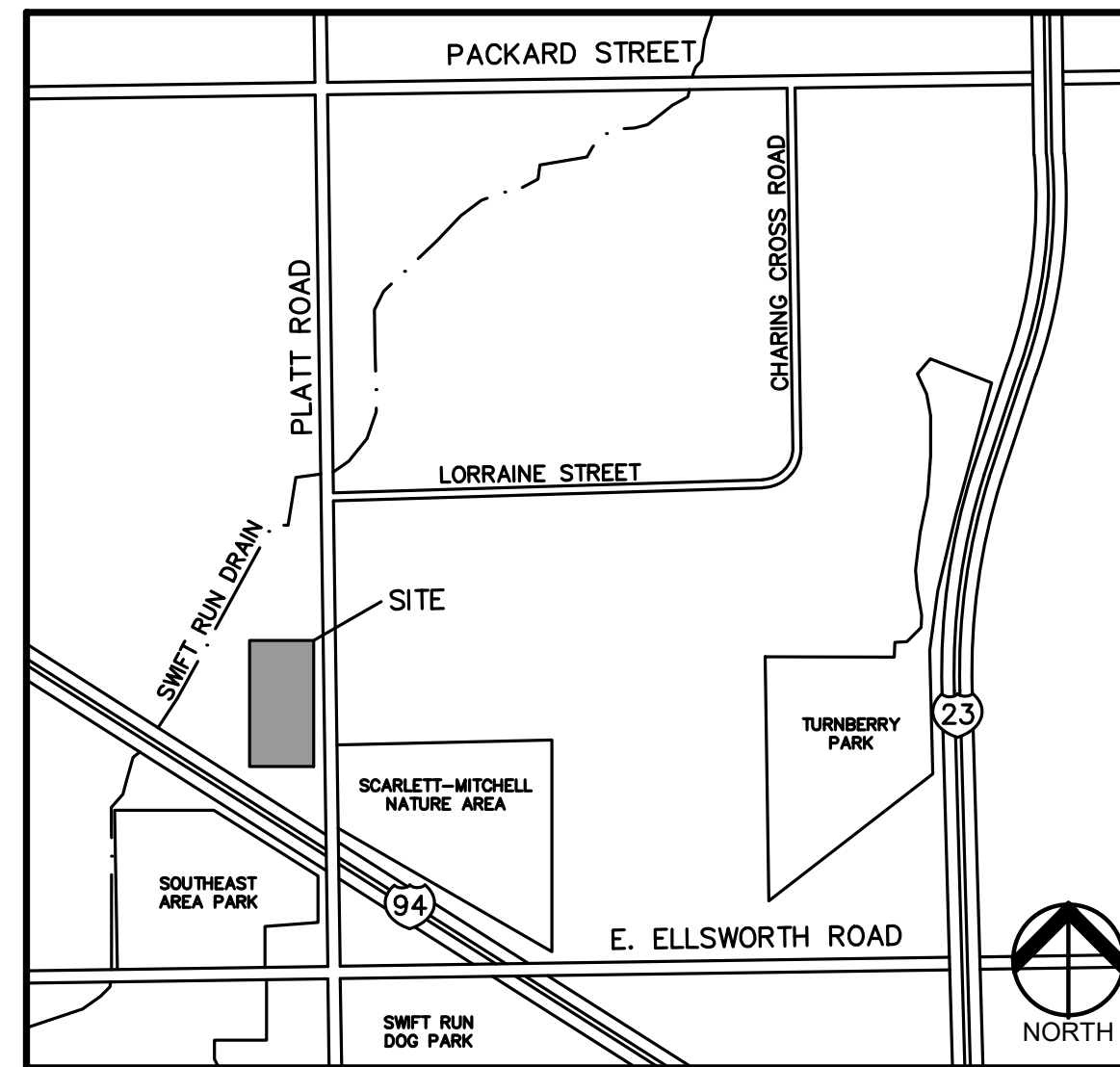
3696 PLATT ROAD
PRT SE 1/4 SEC 10, T3S, R6E, COM E 1/4 COR OF SEC 10, TH S 1 DEG W 941.50 FT FOR POB, TH CONT S 1 DEG W 165 FT, TH N 89 DEG 57 MIN W 470.65 FT, TH N 12 DEG 23 MIN 30 SEC E 168.88 FT, TH S 89 DEG 57 MIN E 437.29 FT TO POB, EXC E 33 FT FOR ROW

3746 PLATT ROAD
SEC 10, TH 1 DEG 00 MIN W 1338.58 FT FOR POB, TH S 89 DEG 59 MIN 30 SEC W 470.65 FT, TH N 1 DEG 00 MIN E 232.56 FT, TH S 89 DEG 57 MIN E 470 FT M/L, TH S 1 DEG 00 MIN W TO POB, EXC E 33 FT

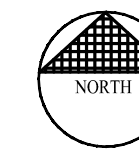
3788 PLATT ROAD
THE N 112 FT OF THE SE 1/4 OF THE SE 1/4 LYING NELY OF I-94 ROW IN SEC 10, T3S, R6E, SUBJECT TO THE ROW IN PLATT ROAD AND EASEMENTS AND ROW RECORDED



OVERALL LOCATION MAP
NO SCALE



DETAILED LOCATION MAP
NO SCALE



PERMIT / APPROVAL SUMMARY

| DATE SUBMITTED | DATE APPROVED | PERMIT / APPROVAL |
|----------------|---------------|-------------------|
| | | |

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| P-1.2 | SOUTH TOPOGRAPHIC SURVEY |
| P-1.3 | TREE INVENTORY |
| P-1.4 | ALTA/ASCM LAND TITLE SURVEY |
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DESIGN TEAM

| OWNER/APPLICANT/DEVELOPER | CIVIL ENGINEER |
|--|--|
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| ARCHITECT | LANDSCAPE ARCHITECT |
| JARRATT ARCHITECTURE 109 N. LAFAYETTE STREET SOUTH LYON, MI 48175 CONTACT: BILL JARRATT PHONE: 248.446.1100 EMAIL: BILLJ@JARRATTARCHITECTURE.COM | VERT VERDE LANDSCAPE ARCHITECTURE PLYMOUTH, MI CONTACT: JAMES GRAY PHONE: 734.249.3568 EMAIL: JAMES@VERTVERDE.COM |



REVISIONS

| DESCRIPTION | DATE |
|---|-----------|
| SITE PLAN SUBMITTAL | 1/13/2022 |
| WASHTENAW COUNTY WATER RESOURCE COMMISSION REVIEW | 1/13/2022 |
| WCWRC/CITY OF ANN ARBOR RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| WCWRC/CITY OF ANN ARBOR RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/22/2022 |
| SPA RESUBMITTAL | 12/8/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

OVERALL TOPOGRAPHIC SURVEY

LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN, MORE PARTICULARLY DESCRIBED AS:

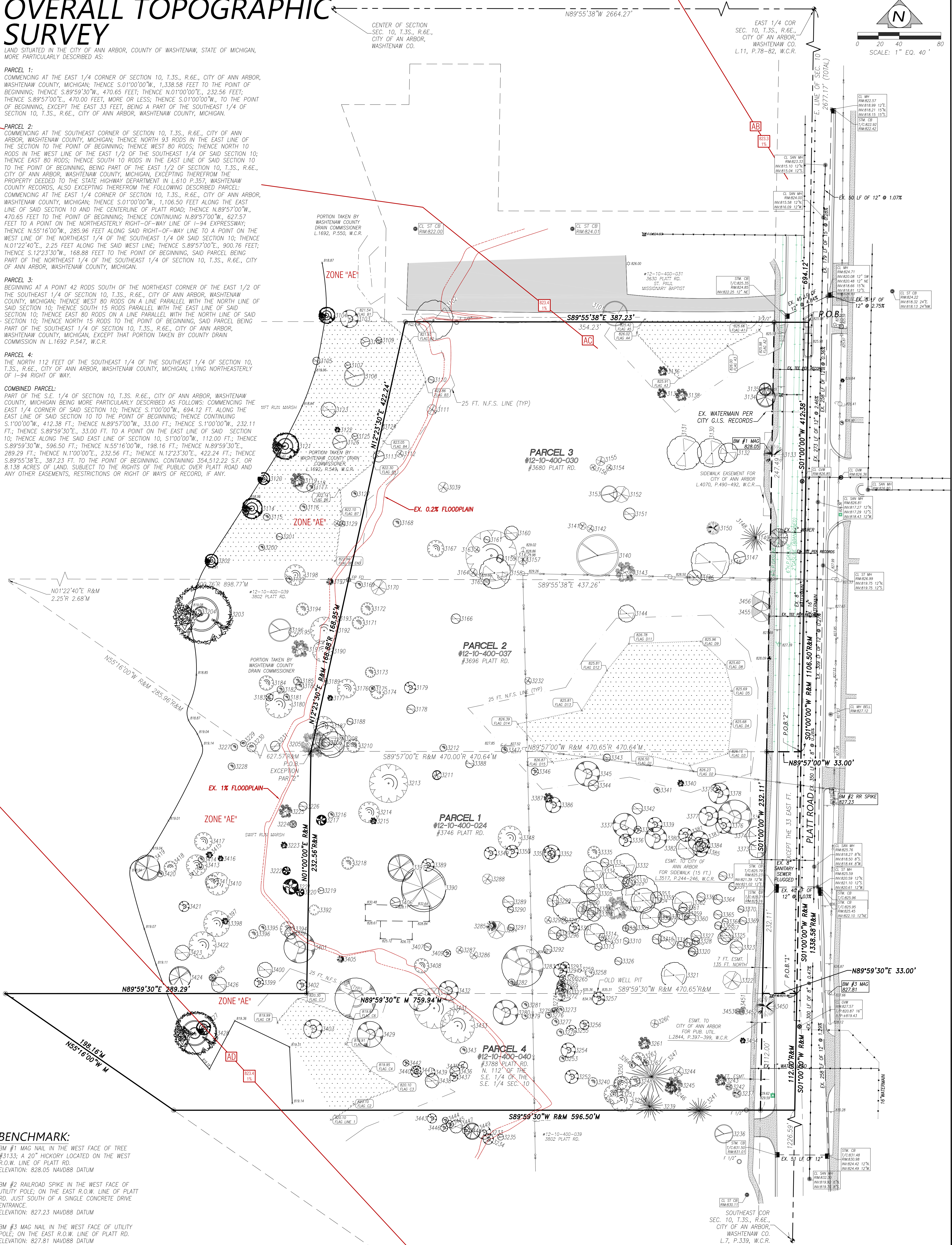
PARCEL 1:
COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE S.01°00'00"W, 1,338.58 FEET TO THE POINT OF BEGINNING; THENCE S.89°59'30"W, 470.65 FEET; THENCE N.01°00'00"E, 232.56 FEET; THENCE S.89°59'00"E, 470.00 FEET, MORE OR LESS; THENCE S.01°00'00"W, TO THE POINT OF BEGINNING, EXCEPT THE EAST 33 FEET, BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 2:
COMMENCING AT THE SOUTHEAST CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE NORTH 93 RODS IN THE EAST LINE OF THE SECTION TO THE POINT OF BEGINNING; THENCE WEST 80 RODS; THENCE NORTH 10 RODS IN THE WEST LINE OF THE SECTION; THENCE SOUTH 1/4 OF SAID SECTION 10; THENCE EAST 80 RODS; THENCE SOUTH 10 RODS IN THE EAST LINE OF SAID SECTION 10; TO THE POINT OF BEGINNING, BEING PART OF THE EAST 1/2 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPT THEREFROM THE PROPERTY DEEDED TO THE STATE HIGHWAY DEPARTMENT IN L.610 P.357, WASHTENAW COUNTY RECORDS, ALSO EXCEPT THEREFROM THE FOLLOWING DESCRIBED PARCEL:
COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE S.01°00'00"W, 1,106.50 FEET ALONG THE EAST LINE OF SAID SECTION 10 AND THE CENTERLINE OF PLATT ROAD; THENCE N.89°57'00"W, 470.65 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N.89°57'00"W, 627.57 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF I-94 EXPRESSWAY; THENCE N.55°16'00"W, 285.96 FEET ALONG SAID RIGHT-OF-WAY LINE TO A POINT ON THE WEST LINE OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 10; THENCE N.01°22'40"E, 2.25 FEET ALONG SAID WEST LINE; THENCE S.89°57'00"E, 900.76 FEET; THENCE S.12°23'30"W, 168.88 FEET TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 3:
BEGINNING AT A POINT 42 RODS SOUTH OF THE NORTHEAST CORNER OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE WEST 80 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE SOUTH 15 RODS PARALLEL WITH THE EAST LINE OF SAID SECTION 10; THENCE EAST 80 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE NORTH 15 RODS TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMMISSION IN L.1692 P.547, W.C.R.

PARCEL 4:
THE NORTH 112 FEET OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, LYING NORTHEASTERLY OF I-94 RIGHT OF WAY.

COMBINED PARCEL:
PART OF THE S.E. 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING THE EAST 1/4 CORNER OF SAID SECTION 10; THENCE S.1°00'00"W, 694.12 FT. ALONG THE EAST LINE OF SAID SECTION 10 TO THE POINT OF BEGINNING; THENCE CONTINUING S.1°00'00"W, 412.38 FT.; THENCE N.89°57'00"W, 33.00 FT.; THENCE S.1°00'00"W, 232.11 FT.; THENCE S.89°59'30"E, 33.00 FT. TO A POINT ON THE EAST LINE OF SAID SECTION 10; THENCE ALONG THE SAID EAST LINE OF SECTION 10, S.1°00'00"W, 112.00 FT.; THENCE S.89°59'30"W, 596.50 FT.; THENCE N.55°16'00"W, 198.16 FT.; THENCE N.89°59'30"E, 289.29 FT.; THENCE N.1°00'00"E, 232.56 FT.; THENCE N.12°23'30"E, 422.24 FT.; THENCE S.89°55'38"E, 387.23 FT. TO THE POINT OF BEGINNING, CONTAINING 354,512.22 S.F. OR 8.138 ACRES OF LAND, SUBJECT TO THE RIGHTS OF THE PUBLIC OVER PLATT ROAD AND ANY OTHER EASEMENTS, RESTRICTIONS OR RIGHT OF WAYS OF RECORD, IF ANY.



BENCHMARK:

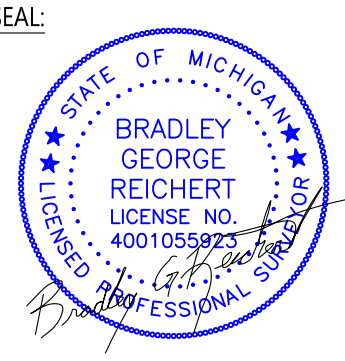
BM #1 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM
 BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE. ELEVATION: 827.23 NAVD88 DATUM
 BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

LEGEND:

- | | | | | |
|---------------------|----------------------------|---------------------------|-------------------------------|-----------------------------|
| ○ FOUND IRON | ▨ EXISTING GRAVEL | — EX. MAJOR CONTOURS | ⊙ EXISTING UTILITY POLE | ⊙ EXISTING STORM STRUCTURE |
| ● SET IRON | ▨ EXISTING PAVER STONE | — EX. MINOR CONTOURS | ⊙ EXISTING WATER SHUT OFF | ⊙ EXISTING DOWN SPOUT |
| ○ RECORD DISTANCE | ▨ EXISTING BUILDING | — EXISTING STORM SEWER | ⊙ EXISTING GATE VALVE | ⊙ EXISTING UTILITY PEDESTAL |
| ○ MEASURED DISTANCE | ▨ EXISTING CONCRETE | — EXISTING SANITARY SEWER | ⊙ EXISTING BOLDER RET. WALL | ⊙ EXISTING HYDRANT |
| ○ PLAT DISTANCE | ▨ EXISTING ASPHALT | — EXISTING WATERMAIN | ⊙ EXISTING WELL | ⊙ EXISTING GAS SHUT OFF |
| | ▨ EXISTING LANDSCAPED AREA | — EXISTING OVERHEAD WIRES | ⊙ EXISTING SANITARY STRUCTURE | ⊙ EXISTING GRADE |
| | | — EXISTING FENCE | | |

REICHERT SURVEYING INC
 P 248.651.0592
 F 248.656.7099
 Mail@ReichertSurveying.com
 140 Flumerfelt Lane
 Rochester, MI 48306

| NO. | DATE | DESCRIPTION | BY: | SEAL: |
|-----|---------|------------------------|-----|-------|
| 1 | 12/8/21 | REV. FLOODPLAIN & UTIL | BGR | |
| 2 | 3/5/22 | REV. PAGE NUMBER | BGR | |



PREPARED FOR:
TROWBRIDGE LAND HOLDING LLC
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326
 (248) 373-5050

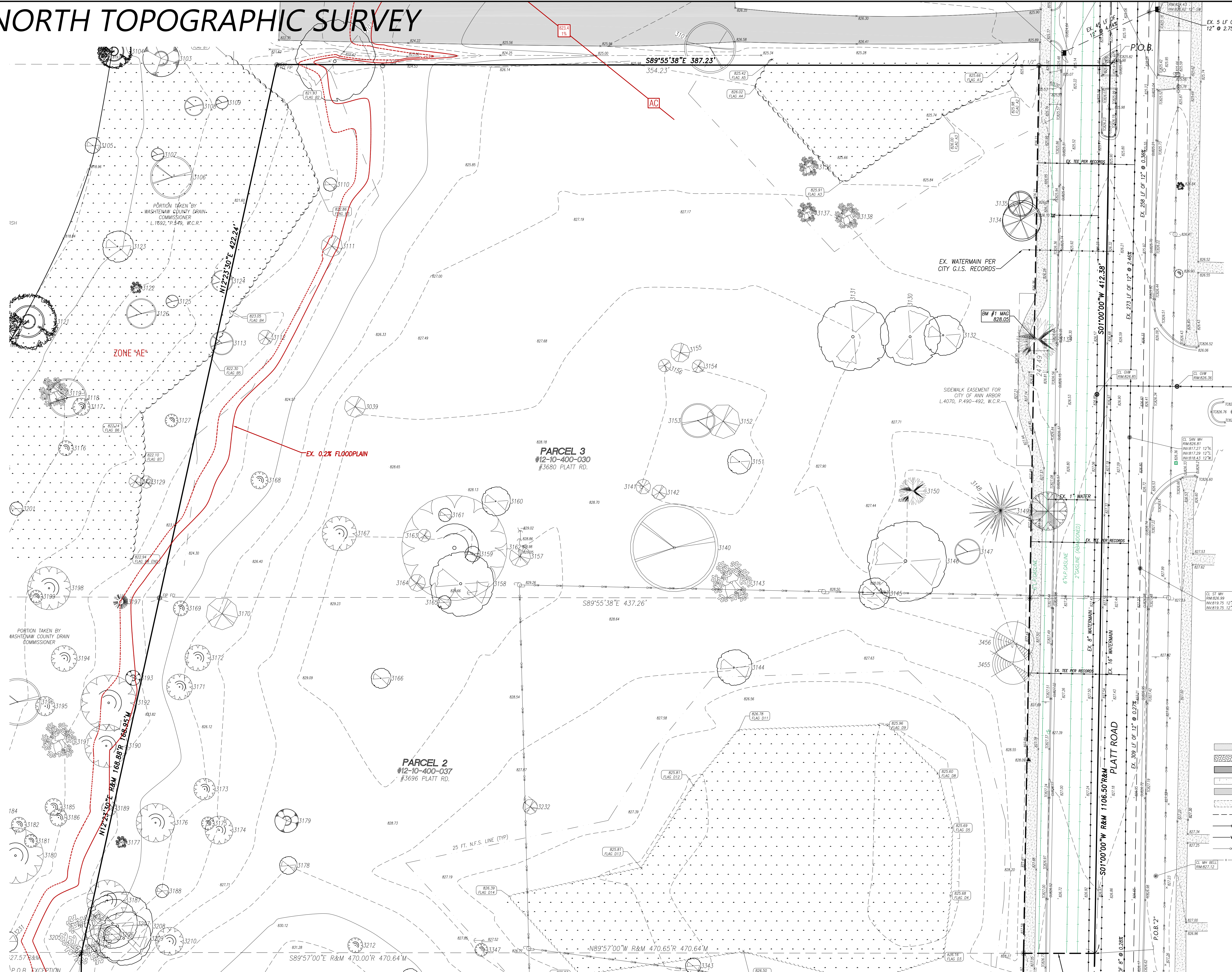
OVERALL TOPOGRAPHIC SURVEY
 PART OF THE SOUTHEAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

DATE: 5/14/20 SCALE: 1"=40' DRAWN: B.G.R.
 JOB # 19-178 PAGE: P-1.0 CHECK: G.H.R.

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NORTH TOPOGRAPHIC SURVEY

PARCEL 2: COMM. AND THE S.E. CORNER OF THE S.E. 1/4 OF SEC. 10, T.35S. R.6E., CITY OF ANN ARBOR, WASHINGTON CO., MICH.; THE N. 1/2 OF THE S.E. 1/4 OF SAID SEC. 10; THE E. 80 RODS IN THE E. LINE OF SAID SEC. 10; EXCEPTING TO THE S.H.D. IN L.B.10 P.357, W.C.R., ALSO EXCEPTING: EXCEPT THAT PORTION TAKEN BY C.D.C.

PARCEL 3: BEGINNING AT A POINT 42 RODS S. OF THE N.E. CORNER OF THE E. 1/2 OF THE S.E. 1/4 OF SEC. 10, T.35S. R.6E., CITY OF ANN ARBOR, WASHINGTON CO., MICH.; TH. W. 80 RODS ON A LINE PARALLEL WITH THE N. LINE OF THE SAID SEC. 10; TH. S. 80 RODS ON A LINE PARALLEL WITH THE E. LINE OF SAID SEC. 10; TH. W. 80 RODS ON A LINE PARALLEL WITH THE S. LINE OF SAID SEC. 10; TH. E. 80 RODS ON A LINE PARALLEL WITH THE W. LINE OF SAID SEC. 10; EXCEPT THAT PORTION TAKEN BY C.D.C. IN L.1892 P.547, W.C.R.

BENCHMARK:
BM #1 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

- LEGEND:**
- FOUND IRON
 - SET IRON
 - R RECORD DISTANCE
 - M MEASURED DISTANCE
 - ▨ EXISTING GRAVEL
 - ▩ EXISTING PAVER STONE
 - ▧ EXISTING BUILDING
 - ▦ EXISTING CONCRETE
 - ▤ EXISTING ASPHALT
 - ▥ EXISTING LANDSCAPED AREA
 - ▧ EXISTING STORM SEWER
 - ▨ EXISTING SANITARY SEWER
 - ▩ EXISTING WATERMAIN
 - ▧ EXISTING OVERHEAD WIRES
 - ▦ EXISTING FENCE
 - ▤ EXISTING UTILITY POLE
 - ▥ EXISTING WATER SHUT OFF
 - ▧ EXISTING GATE VALVE
 - ▨ EXISTING HYDRANT
 - ▩ EXISTING WELL
 - ▧ EXISTING GAS SHUT OFF
 - ▦ EXISTING SANITARY STRUCTURE
 - ▤ EXISTING STORM STRUCTURE
 - ▥ EXISTING DRAIN SPOUT
 - ▧ EXISTING UTILITY PEDESTAL
 - ▨ EXISTING GRADE

PREPARED FOR:
TROWBRIDGE LAND HOLDING LLC
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AUBURN HILLS, MI 48326
(248) 373-5050

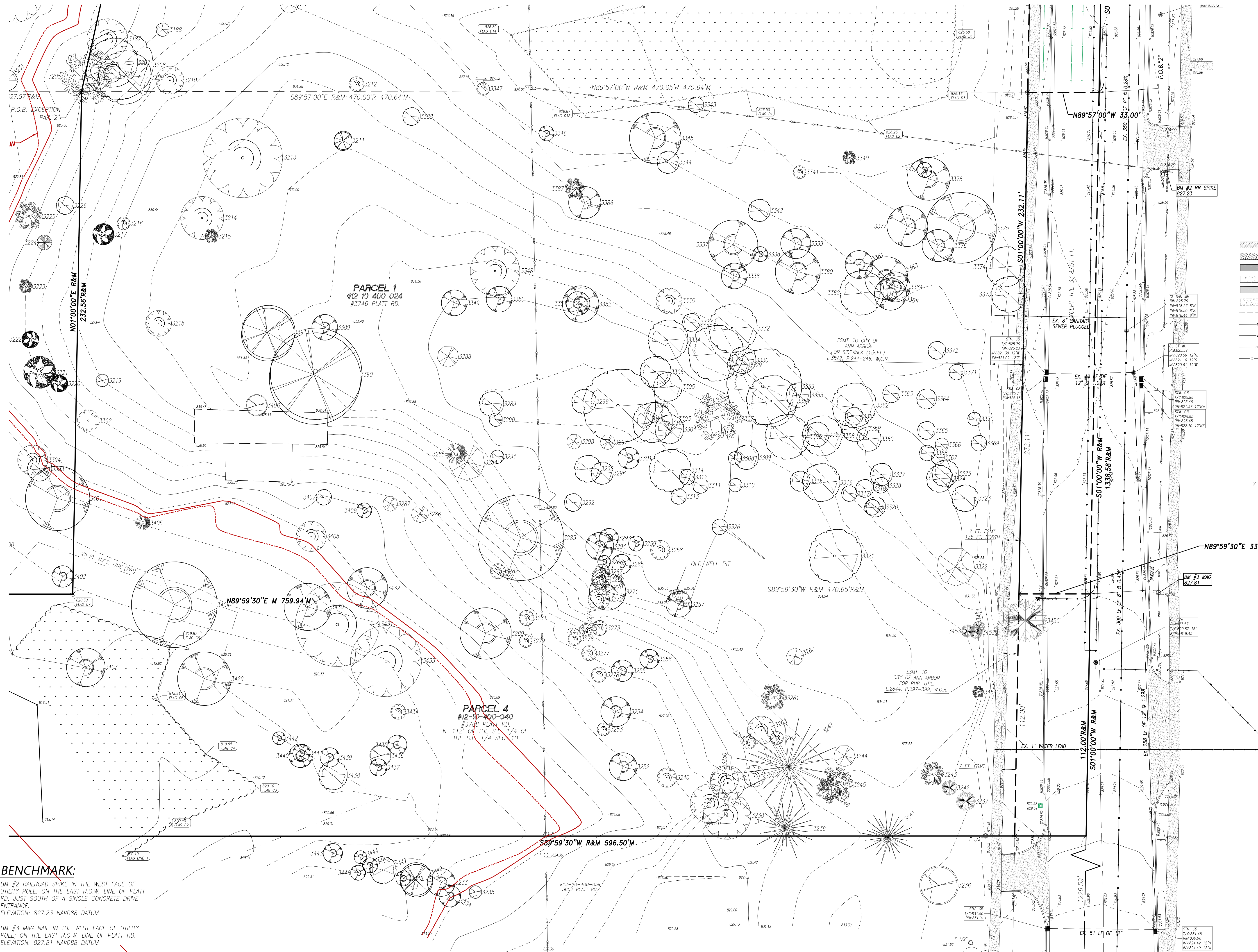
SEAL:

| NO. | DATE | DESCRIPTION | BY | CHK |
|-----|----------|-----------------------|-----|-----|
| 1 | 12/15/21 | REV. FLOODPLAN & UTIL | BGR | BGR |
| 2 | 1/15/22 | REV. PAGE NUMBER | BGR | BGR |

SCALE: 1"=20' DRAWN: B.G.R.
DATE: 5/14/20 CHECK: G.H.R.
JOB # 19-178 PAGE: P-11

x 655.00

SOUTH TOPOGRAPHIC SURVEY



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 - ▨ EXISTING CONCRETE
 - ▨ EXISTING ASPHALT
 - ▨ EXISTING LANDSCAPED AREA
 - ▨ EXISTING STORM SEWER
 - ▨ EXISTING SANITARY SEWER
 - EXISTING WATERMAIN
 - EXISTING OVERHEAD WIRES
 - EXISTING FENCE
 - EXISTING UTILITY POLE
 - EXISTING WATER SHUT OFF
 - EXISTING GATE VALVE
 - EXISTING HYDRANT
 - EXISTING WELL
 - EXISTING GAS SHUT OFF
 - EXISTING SANITARY STRUCTURE
 - EXISTING STORM STRUCTURE
 - EXISTING DOWN SPOUT
 - EXISTING UTILITY PEDESTAL
 - EXISTING GRADE

BENCHMARK:
BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE.
ELEVATION: 827.23 NAVD88 DATUM
BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD.
ELEVATION: 827.61 NAVD88 DATUM

SOUTH TOPOGRAPHIC SURVEY
PARCEL 1: COMMENCING AT THE E. 1/4 COR. OF SEC. 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTEWAM CO., MICH.; THENCE S.01°00'00"W, 1.338.58 FT. TO THE P.O.B.; THENCE S.89°59'30"W, 470.65 FT.; THENCE N.01°00'00"E, 232.56 FT.; THENCE S.89°57'00"E, 470.00 FT.; MORE OR LESS; THENCE S.01°00'00"W, TO THE P.O.B., EXCEPT THE E. 33 FT. OF THE S.E. 1/4 OF SEC. 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTEWAM CO., MICH.
PARCEL 4: THE N. 112 FEET OF THE S.E. 1/4 OF THE S.E. 1/4 OF SEC. 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTEWAM CO., MICH., LING. N.E. OF 1-94 R.O.W.

PREPARED FOR:
TROWBRIDGE LAND HOLDING LLC
2617 BEACON HILL DR.
AUBURN HILLS, MI 48326
(248) 373-5050

| | | | | |
|-----|----------|-----------------------|-----|-----|
| NO. | DATE | DESCRIPTION | BY | CHK |
| 1 | 12/15/21 | REV. FLOORPLAN & UTIL | BGR | BGR |
| 2 | 1/15/22 | REV. PAGE NUMBER | BGR | BGR |

SCALE: 1"=20' DRAWN: B.G.R.
DATE: 5/14/20 CHECK: G.H.R.
JOB # 19-178 PAGE: P-12

TREE INVENTORY

| TREE TABLE | | |
|------------|--------------------------|--------|
| # | DESC. | ELEV. |
| 3039 | 10" WALNUT | 827.90 |
| 3101 | 24" MAPLE | 826.73 |
| 3102 | 14" 22" ELM | 824.14 |
| 3103 | 17" BOXELDER | 820.73 |
| 3104 | 16" WILLOW | 819.66 |
| 3105 | 7" ELM | 819.19 |
| 3106 | 7" 13" MAPLE | 820.77 |
| 3107 | 6" MAPLE | 820.41 |
| 3108 | 9" MAPLE | 820.76 |
| 3109 | 6" MAPLE | 821.14 |
| 3110 | 6" ELM | 822.85 |
| 3111 | 10" WALNUT | 823.49 |
| 3112 | 7" WALNUT | 822.82 |
| 3113 | 11" MAPLE | 822.42 |
| 3114 | 20" WILLOW | 819.44 |
| 3115 | 7" CHERRY | 820.11 |
| 3116 | 7" CHERRY | 821.09 |
| 3117 | 8" CHERRY | 821.70 |
| 3118 | 18" MAPLE | 821.09 |
| 3119 | 6" 9" APPLE | 820.64 |
| 3120 | 12" WILLOW | 819.18 |
| 3121 | 10" 16" WILLOW | 819.20 |
| 3122 | 6" APPLE | 821.04 |
| 3123 | 14" ELM | 819.90 |
| 3124 | 10" MAPLE | 822.18 |
| 3125 | 6" MAPLE | 821.63 |
| 3126 | 14" MAPLE | 821.62 |
| 3127 | 6" CHERRY | 822.48 |
| 3128 | 6" WALNUT | 822.52 |
| 3129 | 6" WALNUT | 822.61 |
| 3130 | 11" 16" ELM | 827.63 |
| 3131 | 14" ELM | 828.05 |
| 3132 | 18" ELM | 827.12 |
| 3133 | 20" HICKORY | 826.94 |
| 3134 | 9" 10" POPLAR | 826.78 |
| 3135 | 12" POPLAR | 826.78 |
| 3136 | 10" APPLE | 826.75 |
| 3137 | 10" APPLE | 827.14 |
| 3138 | 6" 7" APPLE | 826.91 |
| 3140 | 6" 6" 7" 7" MAPLE | 828.57 |
| 3141 | 7" WALNUT | 829.02 |
| 3142 | 7" WALNUT | 829.08 |
| 3143 | 10" 11" APPLE | 828.30 |
| 3144 | 16" ELM | 828.03 |
| 3145 | 6" 8" ELM | 829.26 |
| 3146 | 18" 18" ELM | 829.03 |
| 3147 | 12" MAPLE | 829.48 |
| 3148 | 14" PINE | 828.92 |
| 3149 | 18" OAK | 827.56 |
| 3150 | 13" HICKORY | 829.52 |
| 3151 | 11" ELM | 829.52 |
| 3152 | 16" WALNUT | 829.47 |
| 3153 | 16" MAPLE | 829.30 |
| 3154 | 6" WALNUT | 828.96 |
| 3155 | 9" WALNUT | 828.72 |
| 3156 | 6" WALNUT | 828.98 |
| 3157 | 10" WALNUT | 829.34 |
| 3158 | 6" 6" 7" 10" ELM | 829.61 |
| 3159 | 7" ELM | 828.98 |
| 3160 | 13" ELM | 828.81 |
| 3161 | 6" ELM | 828.82 |
| 3162 | 9" 9" 10" 10" 11" CHERRY | 829.11 |
| 3163 | 6" WALNUT | 828.95 |
| 3164 | 8" WALNUT | 829.96 |
| 3165 | 6" ELM | 829.59 |

| TREE TABLE | | |
|------------|------------------------|--------|
| # | DESC. | ELEV. |
| 3166 | 9" ELM | 829.80 |
| 3167 | 16" CHERRY | 828.92 |
| 3168 | 8" CHERRY | 824.38 |
| 3169 | 7" CHERRY | 825.03 |
| 3170 | 15" WALNUT | 826.12 |
| 3171 | 6" 6" CHERRY | 825.83 |
| 3172 | 6" 6" CHERRY | 826.49 |
| 3173 | 10" CHERRY | 825.77 |
| 3174 | 6" 7" CHERRY | 827.06 |
| 3175 | 6" CHERRY | 826.65 |
| 3176 | 6" 12" CHERRY | 825.60 |
| 3177 | 6" APPLE | 824.17 |
| 3178 | 8" ELM | 828.98 |
| 3179 | 11" BOXELDER | 828.76 |
| 3180 | 6" CHERRY | 822.12 |
| 3181 | 6" CHERRY | 822.41 |
| 3182 | 7" CHERRY | 822.10 |
| 3183 | 7" BOXELDER | 822.08 |
| 3184 | 7" 7" CHERRY | 821.99 |
| 3185 | 8" CHERRY | 822.84 |
| 3186 | 8" CHERRY | 822.91 |
| 3187 | 6" 6" 7" CHERRY | 824.47 |
| 3188 | 6" ELM | 826.02 |
| 3189 | 7" CHERRY | 823.70 |
| 3190 | 6" 7" 7" CHERRY | 823.58 |
| 3191 | 9" 9" APPLE | 822.91 |
| 3192 | 6" 6" 7" 7" CHERRY | 823.56 |
| 3193 | 7" BOXELDER | 823.63 |
| 3194 | 6" 6" CHERRY | 822.51 |
| 3195 | 9" CHERRY | 822.28 |
| 3196 | 11" 11" MAPLE | 821.85 |
| 3197 | 7" MULBERRY | 823.41 |
| 3198 | 9" 11" CHERRY | 822.50 |
| 3199 | 6" CHERRY | 822.23 |
| 3200 | 6" CHERRY | 820.33 |
| 3201 | 6" ELM | 820.88 |
| 3202 | 6" 7" WILLOW | 819.04 |
| 3203 | 10" 12" 16" 19" WILLOW | 819.82 |
| 3204 | 9" CHERRY | 820.62 |
| 3205 | 13" 13" APPLE | 825.13 |
| 3206 | 8" ELM | 825.66 |
| 3207 | 8" 14" ELM | 825.75 |
| 3208 | 9" 10" 12" ELM | 825.86 |
| 3209 | 11" 13" ELM | 826.39 |
| 3210 | 13" CHERRY | 828.46 |
| 3211 | 9" POPLAR | 831.85 |
| 3212 | 7" CHERRY | 830.66 |
| 3213 | 6" 9" 11" 11" CHERRY | 831.37 |
| 3214 | 6" 7" 7" CHERRY | 831.21 |
| 3215 | 7" APPLE | 831.31 |
| 3216 | 6" CHERRY | 830.03 |
| 3217 | 10" HAWTHORNE | 829.49 |
| 3218 | 6" 6" CHERRY | 831.31 |
| 3219 | 6" MAPLE | 829.04 |
| 3220 | 8" HAWTHORNE | 826.95 |
| 3221 | 15" HAWTHORNE | 826.05 |
| 3222 | 8" HAWTHORNE | 826.22 |
| 3223 | 7" APPLE | 825.99 |
| 3224 | 7" OAK | 825.97 |
| 3225 | 6" 8" APPLE | 824.51 |
| 3226 | 8" ELM | 826.20 |
| 3227 | 7" CHERRY | 820.87 |
| 3228 | 7" CHERRY | 821.05 |
| 3229 | 6" CHERRY | 821.20 |
| 3230 | 9" CHERRY | 821.83 |

| TREE TABLE | | |
|------------|------------------|--------|
| # | DESC. | ELEV. |
| 3231 | 9" ELM | 823.05 |
| 3232 | 7" WALNUT | 828.06 |
| 3233 | 13" BOXELDER | 823.16 |
| 3234 | 10" BOXELDER | 823.64 |
| 3235 | 6" MAPLE | 823.89 |
| 3236 | 18" MAPLE | 831.90 |
| 3237 | 9" HICKORY | 832.19 |
| 3238 | 11" 11" CHERRY | 828.99 |
| 3239 | 14" PINE | 830.86 |
| 3240 | 9" CHERRY | 826.78 |
| 3241 | 12" PINE | 832.41 |
| 3242 | 7" HICKORY | 832.35 |
| 3243 | 6" 6" APPLE | 832.74 |
| 3244 | 10" WALNUT | 833.44 |
| 3245 | 8" 9" APPLE | 832.72 |
| 3246 | 6" 7" APPLE | 832.56 |
| 3247 | 6" 6" 6" 6" PINE | 832.24 |
| 3248 | 10" CHERRY | 831.38 |
| 3249 | 16" CHERRY | 829.58 |
| 3250 | 13" CHERRY | 828.61 |
| 3251 | 9" 9" CHERRY | 827.66 |
| 3252 | 13" BOXELDER | 825.77 |
| 3253 | 6" CHERRY | 826.38 |
| 3254 | 14" BOXELDER | 827.07 |
| 3255 | 10" BOXELDER | 828.10 |
| 3256 | 9" BOXELDER | 828.58 |
| 3257 | 12" BOXELDER | 834.99 |
| 3258 | 9" CHERRY | 835.40 |
| 3259 | 7" BOXELDER | 835.38 |
| 3260 | 8" WALNUT | 834.93 |
| 3261 | 6" 6" APPLE | 833.28 |
| 3262 | 6" CHERRY | 832.56 |
| 3263 | 6" 7" CHERRY | 832.38 |
| 3264 | 6" CHERRY | 831.45 |
| 3265 | 9" BOXELDER | 834.65 |
| 3266 | 6" BOXELDER | 834.66 |
| 3267 | 7" CHERRY | 834.47 |
| 3268 | 8" CHERRY | 834.48 |
| 3269 | 9" CHERRY | 834.53 |
| 3270 | 7" CHERRY | 834.14 |
| 3271 | 6" 11" BOXELDER | 833.77 |
| 3272 | 10" CHERRY | 833.69 |
| 3273 | 7" CHERRY | 829.57 |
| 3274 | 7" CHERRY | 829.08 |
| 3275 | 6" CHERRY | 829.06 |
| 3276 | 6" CHERRY | 828.76 |
| 3277 | 7" CHERRY | 828.13 |
| 3278 | 7" CHERRY | 827.42 |
| 3279 | 6" CHERRY | 826.63 |
| 3280 | 9" 15" BOXELDER | 825.52 |
| 3281 | 7" CHERRY | 827.04 |
| 3282 | 7" CHERRY | 827.75 |
| 3283 | 20" 20" BOXELDER | 832.75 |
| 3284 | 17" WALNUT | 832.63 |
| 3285 | 10" MULBERRY | 832.42 |
| 3286 | 8" WALNUT | 826.71 |
| 3287 | 7" WALNUT | 825.45 |
| 3288 | 10" WALNUT | 835.39 |
| 3289 | 11" ELM | 836.16 |
| 3290 | 6" ELM | 836.01 |
| 3291 | 6" ELM | 834.52 |
| 3292 | 8" ELM | 835.69 |
| 3293 | 9" BOXELDER | 835.26 |
| 3294 | 13" BOXELDER | 835.29 |
| 3295 | 12" ELM | 835.41 |

| TREE TABLE | | |
|------------|------------------|--------|
| # | DESC. | ELEV. |
| 3296 | 10" ELM | 835.30 |
| 3297 | 7" WALNUT | 835.49 |
| 3298 | 7" WALNUT | 835.56 |
| 3299 | 11" ELM | 836.66 |
| 3300 | 6" 9" 9" 9" ELM | 836.73 |
| 3301 | 10" BOXELDER | 835.49 |
| 3302 | 9" 9" ELM | 836.63 |
| 3303 | 11" CEDAR | 837.21 |
| 3304 | 13" ELM | 836.25 |
| 3305 | 13" ELM | 836.27 |
| 3306 | 14" ELM | 835.42 |
| 3307 | 11" 13" APPLE | 836.59 |
| 3308 | 6" ELM | 834.96 |
| 3309 | 11" ELM | 834.37 |
| 3310 | 6" ELM | 834.95 |
| 3311 | 7" ELM | 835.27 |
| 3312 | 7" ELM | 835.63 |
| 3313 | 7" ELM | 835.60 |
| 3314 | 9" 10" ELM | 835.80 |
| 3315 | 9" ELM | 834.14 |
| 3316 | 17" ELM | 833.56 |
| 3317 | 7" ELM | 831.97 |
| 3318 | 8" ELM | 831.25 |
| 3319 | 7" ELM | 831.66 |
| 3320 | 9" ELM | 831.64 |
| 3321 | 6" 7" 11" ELM | 834.30 |
| 3322 | 18" WALNUT | 830.45 |
| 3323 | 12" ELM | 829.68 |
| 3324 | 6" 6" ELM | 830.11 |
| 3325 | 6" 6" ELM | 830.13 |
| 3326 | 7" ELM | 835.05 |
| 3327 | 10" ELM | 830.96 |
| 3328 | 7" ELM | 831.06 |
| 3329 | 10" ELM | 833.01 |
| 3330 | 12" ELM | 831.84 |
| 3331 | 8" 8" 9" ELM | 832.97 |
| 3332 | 9" 13" ELM | 831.37 |
| 3333 | 8" ELM | 833.37 |
| 3334 | 9" 9" ELM | 834.91 |
| 3335 | 6" 6" CHERRY | 832.22 |
| 3336 | 12" BOXELDER | 829.87 |
| 3337 | 10" 13" BOXELDER | 829.05 |
| 3338 | 7" BOXELDER | 829.02 |
| 3339 | 14" BOXELDER | 828.32 |
| 3340 | 7" APPLE | 826.72 |
| 3341 | 6" CHERRY | 826.98 |
| 3342 | 10" ELM | 828.02 |
| 3343 | 7" ELM | 825.72 |
| 3344 | 10" ELM | 828.05 |
| 3345 | 12" 12" BOXELDER | 827.59 |
| 3346 | 7" BOXELDER | 827.81 |
| 3347 | 6" CHERRY | 827.79 |
| 3348 | 6" 8" 9" CHERRY | 834.34 |
| 3349 | 12" BOXELDER | 835.07 |
| 3350 | 12" BOXELDER | 835.05 |
| 3351 | 11" BOXELDER | 834.90 |
| 3352 | 6" 11" BOXELDER | 835.00 |
| 3353 | 15" 19" ELM | 831.96 |
| 3354 | 10" 13" ELM | 832.60 |
| 3355 | 11" ELM | 831.36 |
| 3356 | 8" 12" ELM | 832.74 |
| 3357 | 11" ELM | 831.81 |
| 3358 | 8" 10" ELM | 831.88 |
| 3359 | 12" ELM | 831.14 |
| 3360 | 11" ELM | 830.77 |

| TREE TABLE | | |
|------------|-----------------------|--------|
| # | DESC. | ELEV. |
| 3361 | 8" ELM | 830.81 |
| 3362 | 8" 12" ELM | 830.71 |
| 3363 | 8" ELM | 829.24 |
| 3364 | 9" ELM | 829.49 |
| 3365 | 8" ELM | 829.72 |
| 3366 | 6" ELM | 829.98 |
| 3367 | 6" ELM | 830.13 |
| 3368 | 7" ELM | 830.10 |
| 3369 | 7" ELM | 829.23 |
| 3370 | 6" ELM | 829.11 |
| 3371 | 7" ELM | 829.25 |
| 3372 | 8" ELM | 828.70 |
| 3373 | 16" ELM | 826.90 |
| 3374 | 18" ELM | 827.08 |
| 3375 | 9" 10" 14" BOXELDER | 827.14 |
| 3376 | 15" BOXELDER | 827.58 |
| 3377 | 7" 12" BOXELDER | 827.10 |
| 3378 | 9" 11" BOXELDER | 826.55 |
| 3379 | 7" BOXELDER | 826.55 |
| 3380 | 10" 11" BOXELDER | 828.92 |
| 3381 | 6" 7" BOXELDER | 827.96 |
| 3382 | 20" ELM | 828.24 |
| 3383 | 10" 10" BOXELDER | 827.74 |
| 3384 | 14" BOXELDER | 827.86 |
| 3385 | 15" BOXELDER | 827.92 |
| 3386 | 15" BOXELDER | 828.91 |
| 3387 | 10" APPLE | 828.95 |
| 3388 | 8" ELM | 830.45 |
| 3389 | 12" BOXELDER | 833.42 |
| 3390 | 14" 14" 17" POPLAR | 832.95 |
| 3391 | 26" POPLAR | 832.90 |
| 3392 | 10" LOCUST | 826.58 |
| 3393 | 11" ELM | 823.15 |
| 3394 | 7" 7" CHERRY | 822.98 |
| 3395 | 7" CHERRY | 822.06 |
| 3396 | 9" CHERRY | 821.75 |
| 3397 | 7" APPLE | 820.85 |
| 3398 | 6" 6" 6" 7" CHERRY | 820.73 |
| 3399 | 9" BOXELDER | 819.84 |
| 3400 | 14" ELM | 820.65 |
| 3401 | 13" 17" BOXELDER | 822.67 |
| 3402 | 10" BOXELDER | 821.16 |
| 3403 | 18" BOXELDER | 820.01 |
| 3404 | 7" 7" 7" 12" BOXELDER | 821.52 |
| 3405 | 7" MULBERRY | 823.04 |
| 3406 | 10" MAPLE | 832.61 |
| 3407 | 7" ELM | 824.89 |
| 3408 | 14" CHERRY | 823.84 |
| 3409 | 7" BOXELDER | 824.68 |
| 3410 | 6" 8" 8" CHERRY | 821.29 |
| 3411 | 6" 7" CHERRY | 821.11 |
| 3412 | 6" CHERRY | 820.68 |
| 3413 | 6" 7" 7" CHERRY | 820.47 |
| 3414 | 6" CHERRY | 820.84 |
| 3415 | 7" APPLE | 821.15 |
| 3416 | 6" APPLE | 821.69 |
| 3417 | 8" 9" CHERRY | 820.75 |
| 3418 | 6" 6" CHERRY | 821.05 |
| 3419 | 25" POPLAR | 820.31 |
| 3420 | 6" CHERRY | 820.99 |
| 3421 | 10" BOXELDER | 821.20 |
| 3422 | 6" 6" 7" 7" CHERRY | 820.35 |
| 3423 | 14" ELM POOR | 820.41 |
| 3424 | 22" POPLAR | 820.45 |
| 3425 | 7" OAK | 820.84 |

| TREE TABLE | | |
|------------|------------|--------|
| # | DESC. | ELEV. |
| 3426 | 14" ELM | 820.94 |
| 3427 | 14" WILLOW | 819.41 |
| 3428 | 42" WILLOW | 819.2 |

LEGAL DESCRIPTION

LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN, MORE PARTICULARLY DESCRIBED AS:

PARCEL 1: COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE SOUTH 01°00'00"W, 1,338.58 FEET TO THE POINT OF BEGINNING; THENCE S.89°59'30"W, 470.65 FEET; THENCE N.01°00'E, 232.56 FEET; THENCE S.89°57'00"E, 470.00 FEET, MORE OR LESS; THENCE S.01°00'00"W, TO THE POINT OF BEGINNING, EXCEPT THE EAST 33 FEET, BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 2: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE NORTH 93 RODS IN THE EAST LINE OF THE SECTION TO THE POINT OF BEGINNING; THENCE WEST 80 RODS; THENCE NORTH 10 RODS IN THE WEST LINE OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 10; THENCE EAST 80 RODS; THENCE SOUTH 10 RODS IN THE EAST LINE OF SAID SECTION 10 TO THE POINT OF BEGINNING; BEING PART OF THE EAST 1/2 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPTING THEREFROM THE PROPERTY DEEDED TO THE STATE HIGHWAY DEPARTMENT IN LIBER 610 PAGE 357, WASHTENAW COUNTY RECORDS, ALSO EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCEL: COMMENCING AT THE EAST 1/4 CORNER OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE S.01°00'00"W, 1,106.50 FEET ALONG THE EAST LINE OF SAID SECTION 10 AND THE CENTERLINE OF PLATT ROAD; THENCE N.89°57'00"W, 470.65 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING N.89°57'00"W, 627.57 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF I-94 EXPRESSWAY; THENCE N.55°16'00"W, 285.96 FEET ALONG SAID RIGHT-OF-WAY LINE TO A POINT ON THE WEST LINE OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 10; THENCE N.01°22'40"E, 2.25 FEET ALONG THE SAID WEST LINE; THENCE S.89°57'00"E, 900.76 FEET; THENCE S.12°23'30"W, 168.88 FEET TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN.

PARCEL 3: BEGINNING AT A POINT 42 RODS SOUTH OF THE NORTHEAST CORNER OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 10, T.3S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE WEST 80 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE SOUTH 15 RODS PARALLEL WITH THE EAST LINE OF SAID SECTION 10; THENCE NORTH 15 RODS ON A LINE PARALLEL WITH THE NORTH LINE OF SAID SECTION 10; THENCE NORTH 15 RODS TO THE POINT OF BEGINNING, SAID PARCEL BEING PART OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMMISSION IN LIBER 1692 PAGE 547, WASHTENAW COUNTY RECORDS.

PARCEL 4: THE NORTH 112 FEET OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, LYING NORTHEASTERLY OF I-94 RIGHT OF WAY.

TITLE COMMITMENT INFORMATION THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN VANGUARD TITLE COMPANY, COMMITMENT NO. VGA212014, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2019 AT 8:00 A.M.

GENERAL NOTES 1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN. 2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON. 3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2016 ALTA/ACSM SURVEY REQUIREMENTS. 4. THE SUBJECT PROPERTY HAS ACCESS TO PLATT ROAD, A PUBLIC STREET OR HIGHWAY. 5. THERE IS NO VISIBLE EVIDENCE OF CEMETERIES OR SUBJECT PROPERTY. 6. THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS. 7. THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, CORERS OR OVERLAPS. 8. BUILDING AREAS SHOWN HEREON ARE FOR THE FOOTPRINT OF THE BUILDING ONLY. 9. NO APPARENT CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM THE CONTROLLING JURISDICTION, NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS. 10. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A MICHIGAN SEAL OF A LICENSED SURVEYOR AND MAPPER. ADDITIONS AND DELETIONS TO SURVEY MAPS, SKETCHES, OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES. 11. WETLANDS DETERMINED BY ASTI DATED 6/24/19 OR OTHER ENVIRONMENTAL ISSUES, UNLESS OTHERWISE NOTED.

ALTA/ACSM LAND TITLE SURVEY PROJECT NAME TROWBRIDGE LAND HOLDINGS, LLC 3788, 3746, 3696 & 3680 PLATT RD. WASHTENAW COUNTY ANN ARBOR, MI

SURVEYOR'S CERTIFICATE TO: TROWBRIDGE LAND HOLDINGS, LLC, A MICHIGAN LIMITED LIABILITY COMPANY, TO BE DETERMINED ENTITY, AND RODMAN K. RAJJOUB AND ZOKAA K. RAJJOUB, HUSBAND AND WIFE, AND VANGUARD TITLE COMPANY: THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 6B, 7A, 7B1, 7C, 8, 9, 11, 13, 14, 16, 17, 18, 19, 20 AND 21 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON MAY 14, 2020.

DATE OF PLAT OR MAP: DECEMBER 4, 2020 JOB NUMBER: 19-178 SCALE: 1" = 50' DRAWN BY: G.H.R. APPROVED BY: B.G.R. REGISTERED SURVEYOR: BRADLEY G. REICHERT DATE: 10/16/20 PROFESSIONAL LAND SURVEYOR NO. 55923 STATE OF MICHIGAN

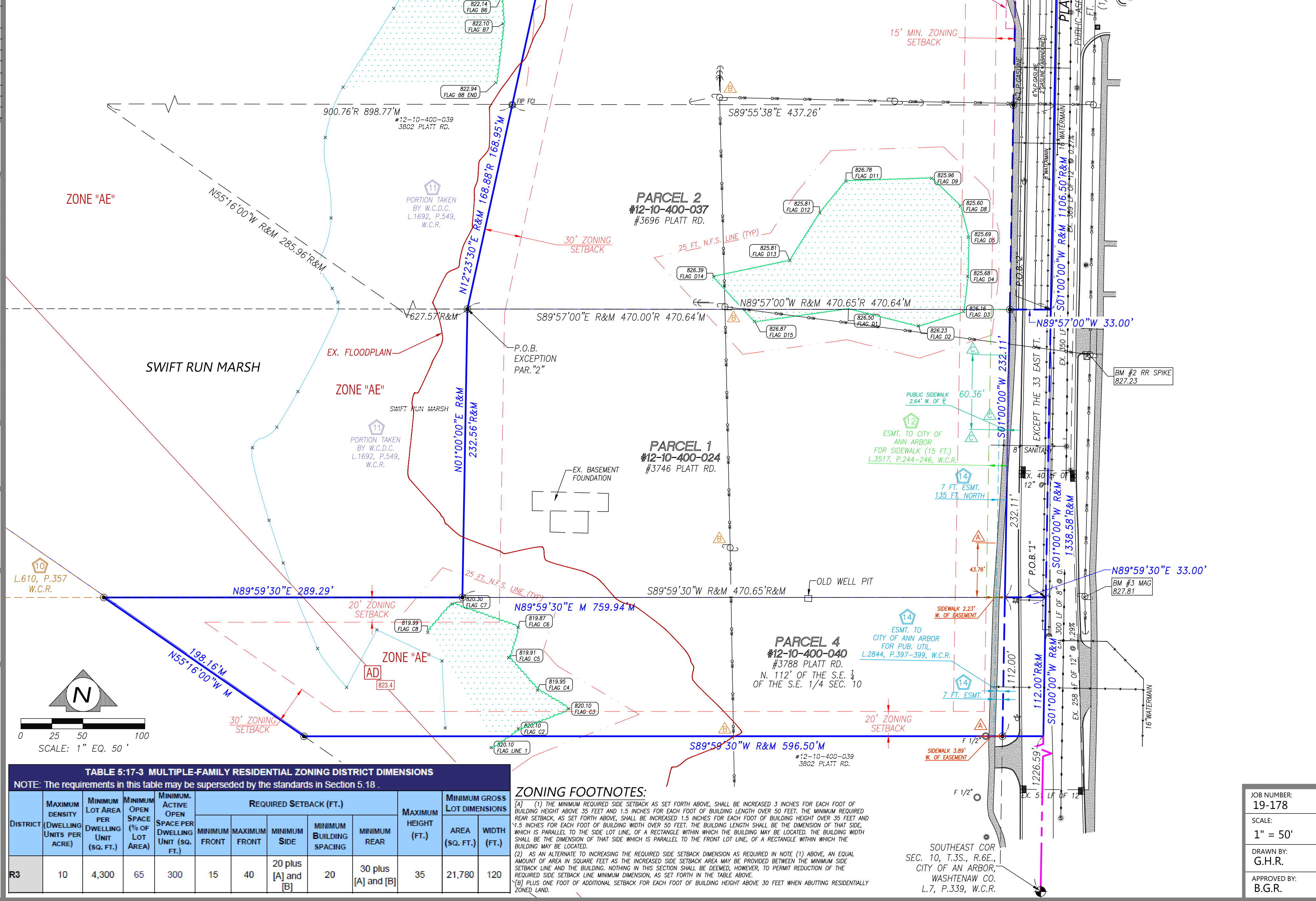
REICHERT SURVEYING INC. 140 Flumerfelt Lane Rochester, MI 48306 P 248.651.0592 F 248.656.7099

BENCHMARK:

BM #1 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE. ELEVATION: 827.23 NAVD88 DATUM

BM #3 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM



ZONING DATA table with columns: ZONING ITEM, REQUIRED, OBSERVED, PARKING REQUIREMENTS.

BEARING BASIS BEARINGS SHOWN HEREON ARE BASED ON EAST LINE OF SECTION 10

LAND AREA and PARCEL AREA tables.

VICINITY MAP and PARKING STALLS table.

STATEMENT OF ENCROACHMENTS listing public sidewalk, overhead wires, and utility lines.

FLOOD NOTE: BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.FEMA.GOV...

LEGEND table listing symbols for various features like iron, clean out, parking count, etc.

TABLE 5-17-3 MULTIPLE-FAMILY RESIDENTIAL ZONING DISTRICT DIMENSIONS. Includes columns for District, Maximum Density, Minimum Lot Area, etc.

ZONING FOOTNOTES: (A) TO THE MINIMUM REQUIRED SIDE SETBACK AS SET FORTH ABOVE, SHALL BE INCREASED 3 INCHES FOR EACH FOOT OF BUILDING HEIGHT ABOVE 30 FEET...

- SCHEDULE "B" ITEMS: 9. RIGHTS OF TENANTS NOW IN POSSESSION... 10. INTEREST OF STATE HIGHWAY COMMISSIONER... 11. INTEREST OF STATUTORY DRAINAGE BOARD... 12. PUBLIC ROAD EASEMENT FOR SIDEWALK... 13. GRANT OF EASEMENT FOR SIDEWALKS... 14. AFFIDAVIT REGARDING LEGAL DESCRIPTION... 15. RIGHTS OF THE PUBLIC AND OF ANY GOVERNMENTAL UNIT...

ZONING DATA table (repeated).

BEARING BASIS (repeated).

LAND AREA and PARCEL AREA (repeated).

VICINITY MAP and PARKING STALLS (repeated).

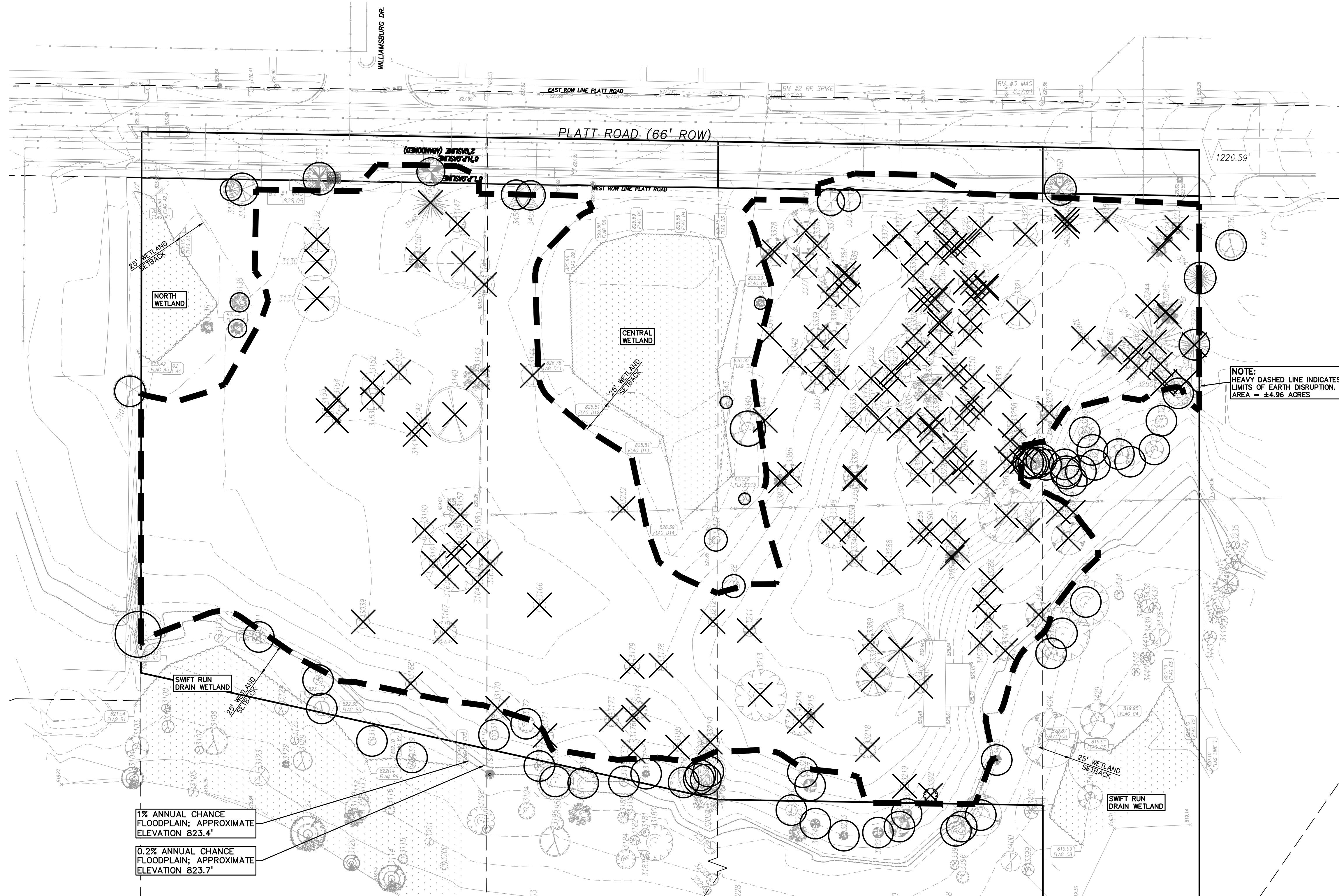
STATEMENT OF ENCROACHMENTS (repeated).

FLOOD NOTE (repeated).

LEGEND (repeated).

ZONING FOOTNOTES (repeated).

NOTE:
A GREATER BUFFER FOR CONSTRUCTION FROM THE WETLAND (GENERALLY 10' BEYOND THE 25' BUFFER) WILL BE PROVIDED, THE BUILDINGS HAVE BEEN SEPARATED TO PROVIDE BETTER FIRE ACCESS, AND UNITS IN CONFLICT WITH THE FLOOD PLAIN HAVE BEEN REMOVED. THE CURRENT PLAN, INCLUDES ABOUT 5 UNITS/ACRE, HALF OF 10 UNITS/ACRE ALLOWED IN THIS ZONING DISTRICT. SOME TREES WILL BE REMOVED; HOWEVER, PROTECTION OF TREES OUTSIDE OF THESE AREAS WILL BE MAXIMIZED WITH GRADING, RETAINING WALLS, ETC.



1% ANNUAL CHANCE FLOODPLAIN; APPROXIMATE ELEVATION 823.4'
0.2% ANNUAL CHANCE FLOODPLAIN; APPROXIMATE ELEVATION 823.7'

NOTE:
HEAVY DASHED LINE INDICATES LIMITS OF EARTH DISRUPTION. AREA = ±4.96 ACRES

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | ⊙ MEASURED |
| ⊗ NAIL & CAP SET | | ⊙ CALCULATED |

| EXISTING | PROPOSED |
|---------------|---|
| —OH—ELEC—V—V— | ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE |
| —UG—CATV— | UNDERGROUND CABLE TV, CATV PEDESTAL |
| —UG—PHONE— | TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE |
| —UG—ELEC— | ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE |
| —GAS— | GAS MAIN, VALVE & GAS LINE MARKER |
| —WATER— | WATER MAIN, HYD. GATE VALVE, TAPPING BLEEVE & VALVE |
| —SEWER— | SANITARY SEWER, CLEANOUT & MANHOLE |
| —CS— | STORM SEWER, CLEANOUT & MANHOLE |
| —C/S— | COMBINED SEWER & MANHOLE |
| —S— | SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN |
| —R— | ROOF INDICATOR VALVE |
| —W— | WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF |
| —M— | MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE |
| —U— | UNIDENTIFIED STRUCTURE |
| —S— | SPOT ELEVATION |
| —C— | CONTOUR LINE |
| —F— | FENCE |
| —G— | GUARD RAIL |
| —S— | STREET LIGHT |
| —S— | SIGN |
| —C— | CONCRETE |
| —A— | ASPHALT |
| —G— | GRAVEL SHOULDER |
| —W— | WETLAND |
| | 310 HEAVY FLOW DUTY ONLY |
| | 310 HEAVY DEEP DUTY STRENGTH |

REFERENCE DRAWINGS

| | |
|----------------|--------------|
| WATER MAIN | XXXXXXXXXXXX |
| SANITARY SEWER | XXXXXXXXXXXX |
| STORM SEWER | XXXXXXXXXXXX |
| COMBINED SEWER | XXXXXXXXXXXX |
| ELECTRIC | XXXXXXXXXXXX |
| TELEPHONE | XXXXXXXXXXXX |
| GAS | XXXXXXXXXXXX |
| PETROLEUM | XXXXXXXXXXXX |
| CATV | XXXXXXXXXXXX |
| FLOOD PLAIN | XXXXXXXXXXXX |
| OTHER | XXXXXXXXXXXX |

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE E.O.W. LINE OF PLATT RD.
ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD
ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:

TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

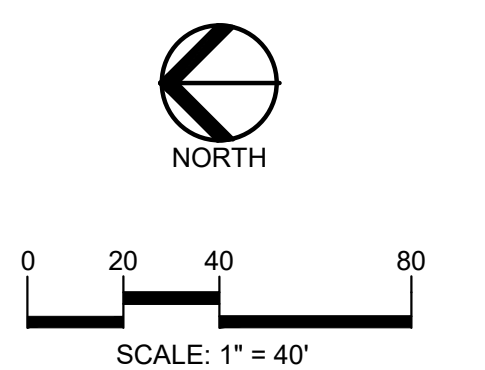
PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE:

BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

DEMOLITION LEGEND:

| | |
|----------------------|---|
| TREE TO BE PROTECTED | ⊗ |
| TREE TO BE REMOVED | ⊗ |



CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020
DRAWING TITLE
NATURAL FEATURES PLAN

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:

S:\PROJECTS\2020-0151 PLATT ROAD TOWNHOMES -\CADD\SITE PLANS\01-NAT-202010.dwg



CAUTION!!
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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPA/WCWR REVIEW | 1/13/2022 |
| SPA/WCWR RESUBMITTAL | 4/7/2022 |
| WCWR RESUBMITTAL | 5/3/2022 |
| SPA/WCWR RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
NATURAL FEATURES OVERLAY PLAN

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊗ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊗ R. RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | ⊗ M. MEASURED |
| ⊗ NAIL & CAP SET | | ⊗ C. CALCULATED |

EXISTING

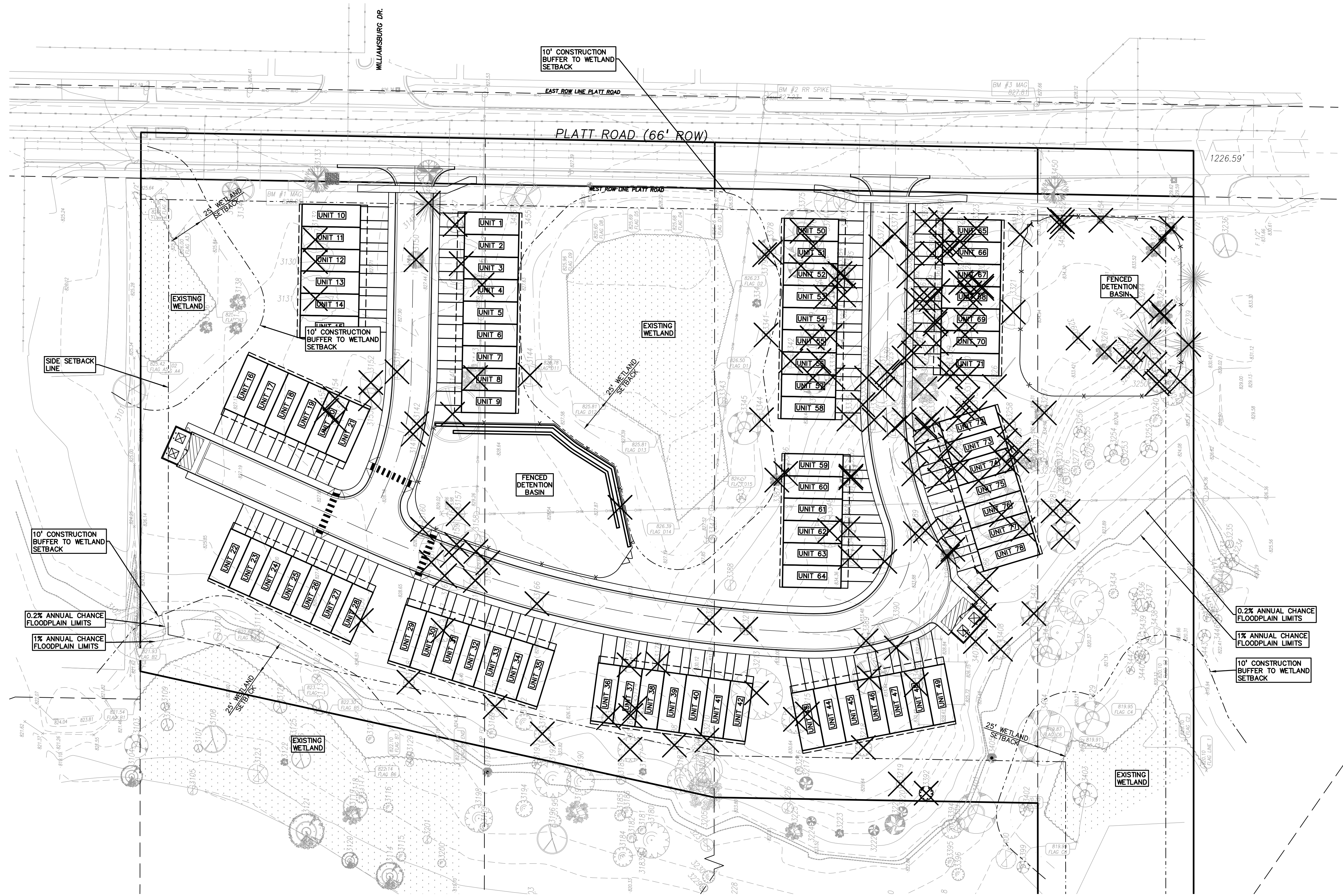
- OH-ELEC-44-0 ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS VALVE & GAS LINE MARKER
- WATERMAN, HYD., GATE VALVE, TAPPING BLEED & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIEN

PROPOSED

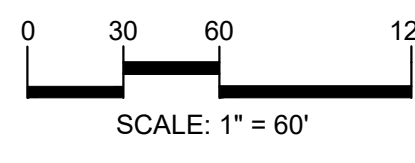
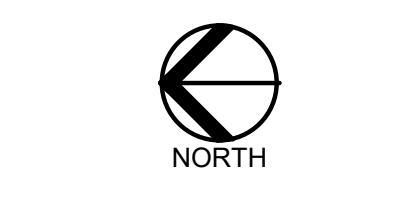
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL SHOULDER
- WETLAND
- 310 HEAVY FLOW DUTY DUTY ONLY
- 310 HEAVY DEEP DUTY DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER



S:\PROJECTS\2020\2020-0151 PLATT ROAD TOWNHOMES -\CIVIL\SITE PLANS\1-5\1FDW-200101.dwg



CAUTION!!
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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

| REVISIONS | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPA/WC/WRC REVIEW | 1/13/2022 |
| SPA/WC/WRC RESUBMITTAL | 4/7/2022 |
| WC/WRC RESUBMITTAL | 5/3/2022 |
| SPA/WC/WRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
NATURAL FEATURES ALTERNATIVES ANALYSIS

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

P-2.2

LEGEND

- | | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | R RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |
-
- | | |
|--|---|
| EXISTING | PROPOSED |
| —OH—ELEC—W—O— | ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE |
| —UG—CATV— | UNDERGROUND CABLE TV, CATV PEDESTAL |
| —UG—PHONE— | TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE |
| —UG—ELEC— | ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE |
| —GAS— | GAS MAIN, VALVE & GAS LINE MARKER |
| —WATER— | WATERMAIN, HYD. GATE VALVE, TAPPING BLEEDIE & VALVE |
| —SANITARY— | SANITARY SEWER, CLEANOUT & MANHOLE |
| —STORM— | STORM SEWER, CLEANOUT & MANHOLE |
| —COMBINED— | COMBINED SEWER & MANHOLE |
| —SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN | |
| —POST INDICATOR VALVE | |
| —WATER VALVE BODY/DRAIN VALVE BOX, SERVICE SHUTOFF | |
| —MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE | |
| —UNIDENTIFIED STRUCTURE | |
| —SPOT ELEVATION | |
| —CONTOUR LINE | |
| —FENCE | |
| —GUARDRAIL | |
| —STREET LIGHT | |
| —SIGN | |
| —CONC. | CONCRETE |
| —ASPH. | ASPHALT |
| —GRAVEL | GRAVEL SHOULDER |
| —WETLAND | WETLAND |
| —3/4" HEAVY FLOW DUTY ONLY | |
| —3/4" HEAVY FLOW DUTY STRENGTH | |

REFERENCE DRAWINGS

- | | |
|----------------|--------------|
| WATER MAIN | XXXXXXXXXXXX |
| SANITARY SEWER | XXXXXXXXXXXX |
| STORM SEWER | XXXXXXXXXXXX |
| COMBINED SEWER | XXXXXXXXXXXX |
| ELECTRIC | XXXXXXXXXXXX |
| TELEPHONE | XXXXXXXXXXXX |
| GAS | XXXXXXXXXXXX |
| PETROLEUM | XXXXXXXXXXXX |
| CATV | XXXXXXXXXXXX |
| FLOOD PLAIN | XXXXXXXXXXXX |
| OTHER | XXXXXXXXXXXX |
| OTHER | XXXXXXXXXXXX |

BENCHMARKS

- BM #1**
 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD.
 ELEVATION: 828.05 NAVD88 DATUM
- BM #2**
 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
 ELEVATION: 827.23 NAVD88 DATUM
- BM #3**
 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD
 ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:

TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.
 PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE:

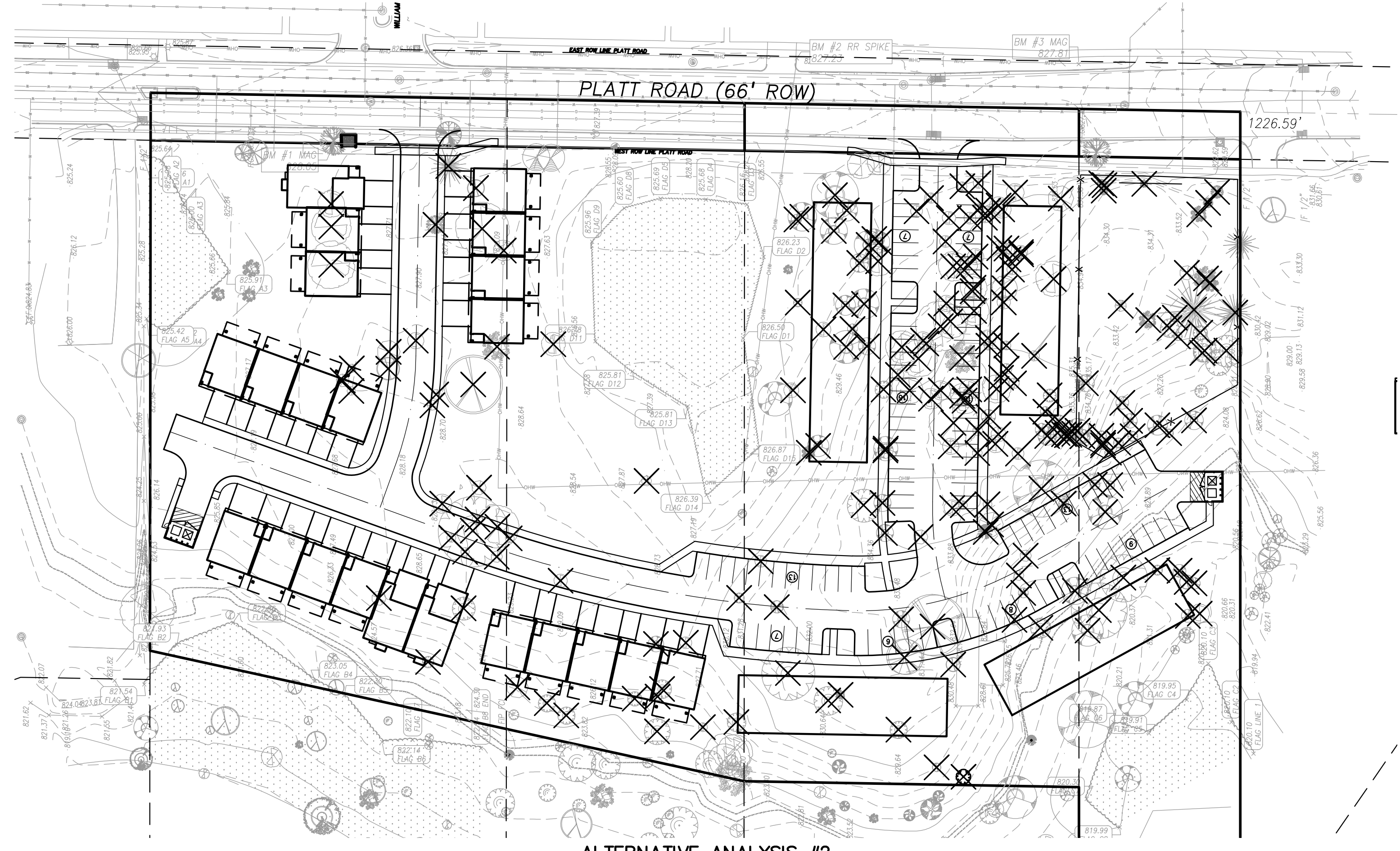
BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

ALTERNATIVE ANALYSIS #1
 THIS OPTION INCLUDES EIGHT ADDITIONAL TOWNHOME UNITS FOR A TOTAL OF 51; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 222 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE PREFERRED OPTION). CONSEQUENTLY, THIS OPTION WAS REJECTED.

ALTERNATIVE ANALYSIS #2
 THIS OPTION INCLUDES 22 TOWNHOME UNITS AND 68 APARTMENT UNITS; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 215 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE PREFERRED OPTION). THE INTRODUCTION OF THE APARTMENT UNITS WOULD ALSO REQUIRE THE SITE TO BE REZONED FROM R3 TO R4B. FOR THESE REASONS, THIS OPTION WAS REJECTED.



ALTERNATIVE ANALYSIS #1
 SCALE: 1" = 60'

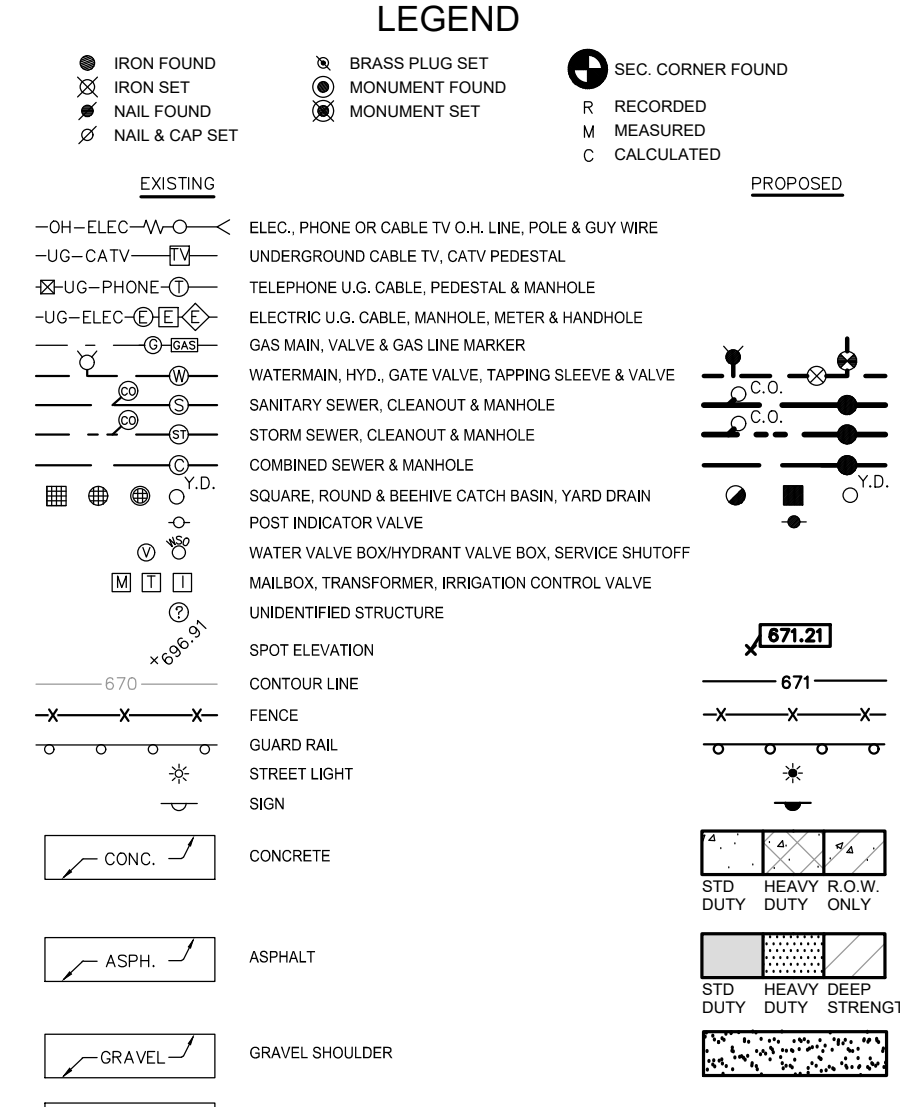


ALTERNATIVE ANALYSIS #2
 SCALE: 1" = 60'

GENERAL DEMOLITION NOTES:
 THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT:

1. ALL MATERIAL TO BE REMOVED, WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO ON-SITE BURY OR BURN PITS SHALL BE ALLOWED.
2. ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES.
3. STAGING/PHASING OF DEMOLITION AND CONSTRUCTION IS TO BE COORDINATED WITH THE OWNER AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
5. REMOVE ALL STRUCTURES DESIGNATED FOR REMOVAL ACCORDING TO THE DEMOLITION PLAN. THIS INCLUDES FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, FLOOR SLABS, UNDERGROUND UTILITIES, CONCRETE, ASPHALT, TREES, ETC.
6. THE CONTRACTOR SHALL, AS A MINIMUM, PROVIDE TREE PROTECTION FENCING AROUND EXISTING TREES TO BE SAVED THAT ARE WITHIN 15 FEET OF CONSTRUCTION ACTIVITIES AND AS INDICATED IN THE PLANS OR PER LOCAL AGENCY REQUIREMENTS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.

8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER AGENCY REQUIREMENTS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO CONFIRM THAT UTILITY LEADS HAVE BEEN TAKEN OUT OF SERVICE PRIOR TO DEMOLITION.
10. ALL BUILDING GAS LEADS, METERS AND ASSOCIATED EQUIPMENT SHALL BE REMOVED AS SHOWN ON THE PLANS. COORDINATE ALL ASSOCIATED WORK WITH THE APPROPRIATE UTILITY COMPANY.
11. REMOVE ALL OVERHEAD AND UNDERGROUND ELECTRICAL LINES WITHIN THE AREA OF CONSTRUCTION AS SHOWN ON THE PLANS. COORDINATE SHUTDOWNS AND REMOVALS WITH ELECTRICAL SERVICE PROVIDER OR THE APPROPRIATE UTILITY COMPANY. (NOTE: PHONE AND CABLE T.V. SERVICES MAY ALSO BE LOCATED ON OVERHEAD LINES.)
12. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF SIGNS AND SUPPORTS WITHIN THE WORK AREA, AS NECESSARY TO FACILITATE CONSTRUCTION. SIGNS SHALL BE PROTECTED OR STOCKPILED FOR REUSE AS SPECIFIED IN THE PLANS OR AS REQUIRED BY THE AGENCY OF JURISDICTION. THE CONTRACTOR SHALL REPLACE ANY DAMAGED SIGNS AND SUPPORTS AT NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE 811/ONE CALL UTILITY LOCATING CENTER, THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
14. ALL EXISTING PUBLIC UTILITY LEADS THAT WILL NOT BE REUSED SHALL BE PERMANENTLY DISCONNECTED FROM THEIR RESPECTIVE UTILITY MAINS IN PLATT ROAD.



REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAN
- OTHER

BENCHMARKS

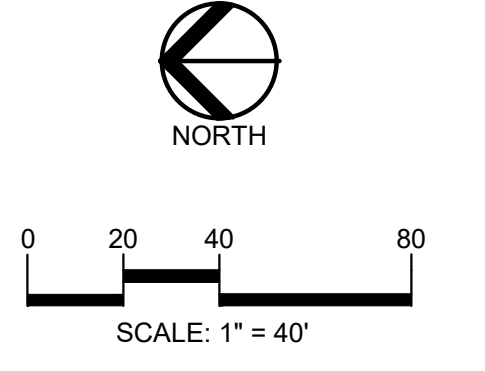
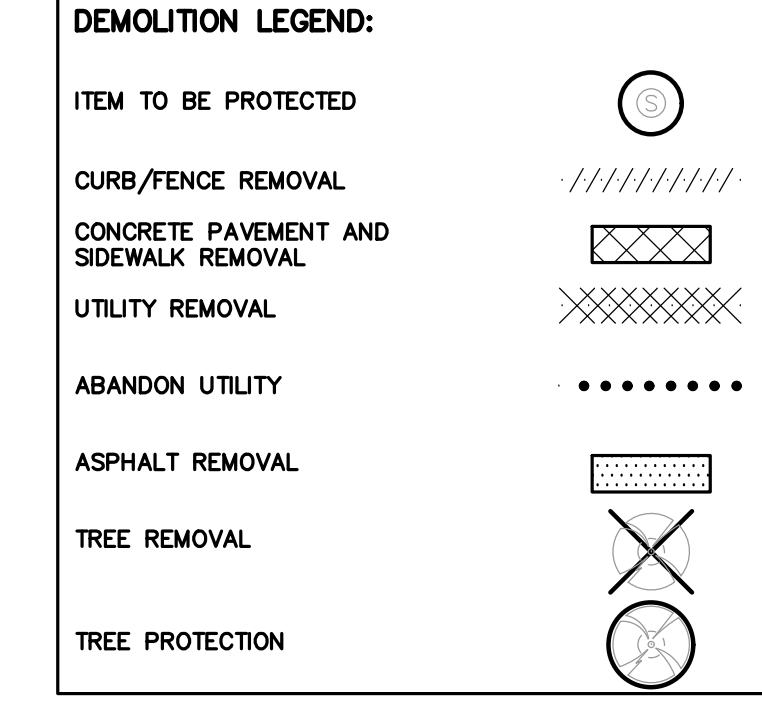
BM #1
 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE R.O.W. LINE OF PLATT RD.
 ELEVATION: 828.05 NAVD88 DATUM

BM #2
 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
 ELEVATION: 827.23 NAVD88 DATUM

BM #3
 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD
 ELEVATION: 827.81 NAVD88 DATUM

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FLOODPLAIN NOTE:
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CAUTION!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS

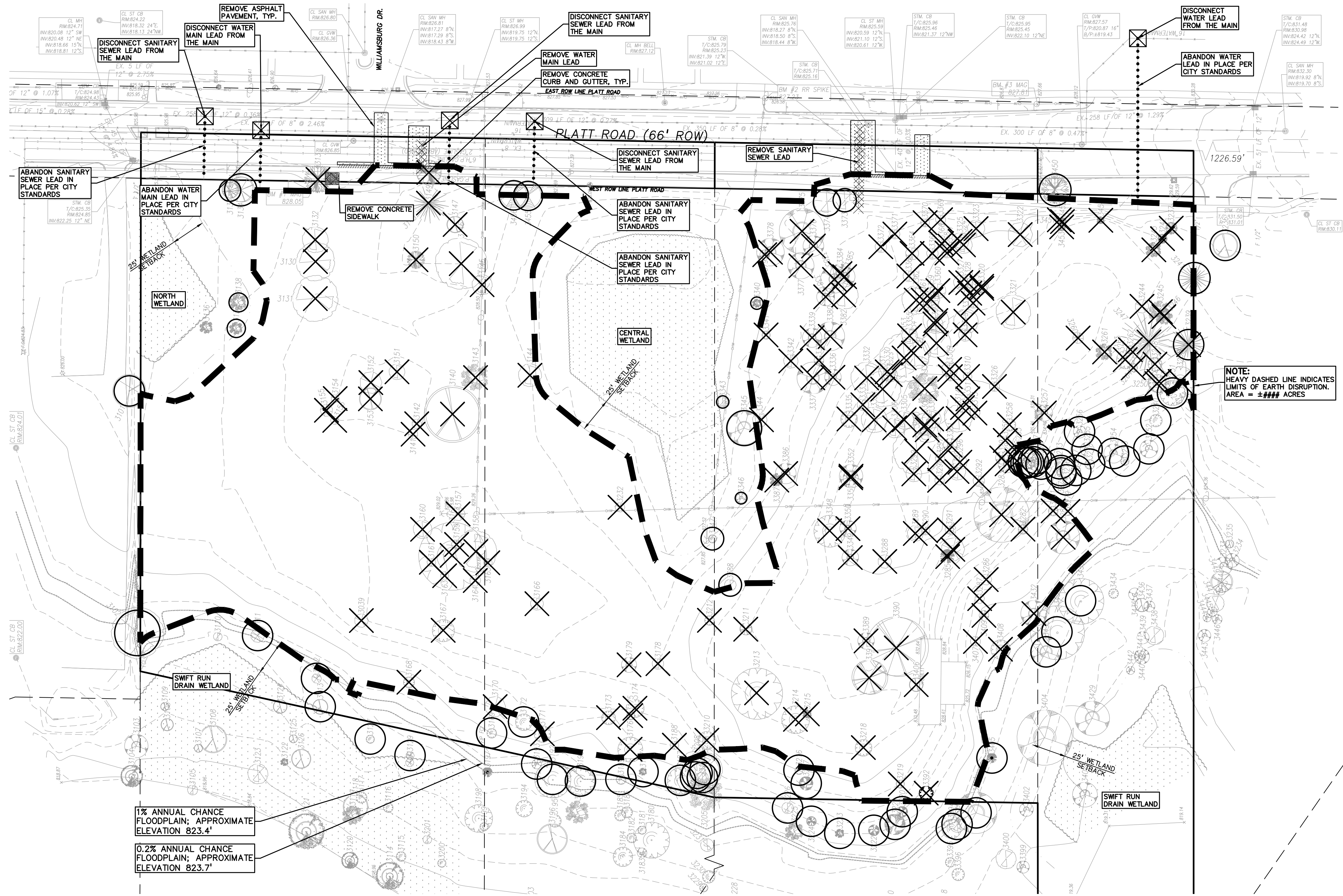
| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPA/CWRC REVIEW | 1/13/2022 |
| SPA/CWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPA/CWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
DEMOLITION PLAN

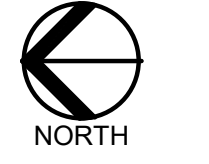
| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

P-2.3



1% ANNUAL CHANCE FLOODPLAIN; APPROXIMATE ELEVATION 823.4'
 0.2% ANNUAL CHANCE FLOODPLAIN; APPROXIMATE ELEVATION 823.7'

S:\PROJECTS\2020-0151 PLATT ROAD TOWNHOMES -\CIVIL\SITE PLANS\1P-2-3 DEMO-2020151.dwg



0 20 40 80
 SCALE: 1" = 40'



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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
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| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
OVERALL DIMENSIONAL LAYOUT PLAN

PEA JOB NO. 2020-0151
 P.M. JC
 DN. JW
 DES. JW
 DRAWING NUMBER:

P-3.0

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |

EXISTING

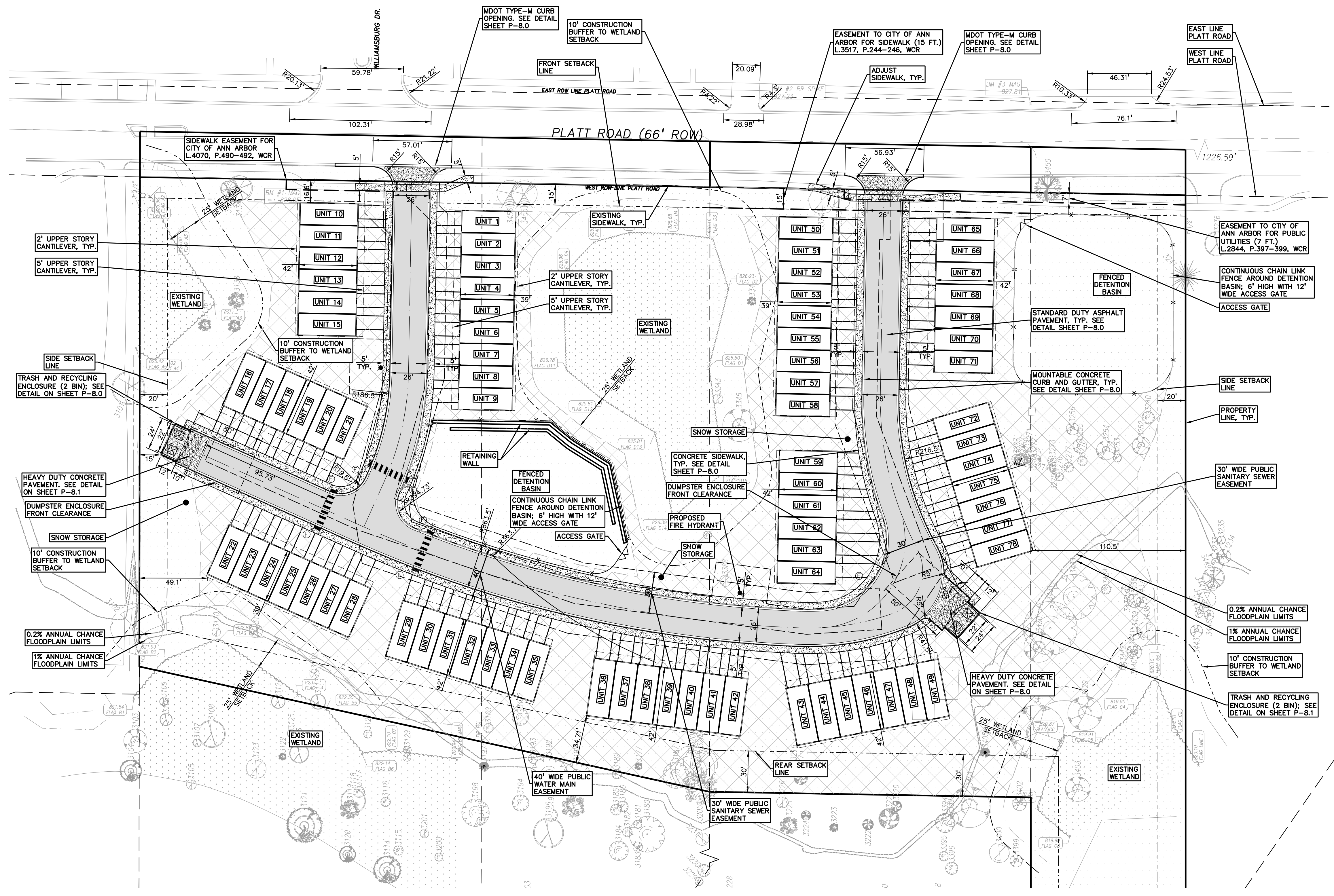
- OH-ELEC— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV— UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE— TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC— ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS— GAS MAIN, VALVE & GAS LINE MARKER
- WATER— WATERMAIN, HYD. GATE VALVE, TAPPING BLEEDIE & VALVE
- SEWER— SANITARY SEWER, CLEANOUT & MANHOLE
- STORM— STORM SEWER, CLEANOUT & MANHOLE
- COMBINED— COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MARB. TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN

PROPOSED

- CONC.— CONCRETE
- ASPH.— ASPHALT
- GRAVEL— GRAVEL SHOULDER
- WETLAND
- 310— HEAVY FLOW DUTY ONLY
- 310— HEAVY FLOW DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER
- OTHER



BENCHMARKS

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 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE ELEVATION: 827.23 NAVD88 DATUM

BM #3
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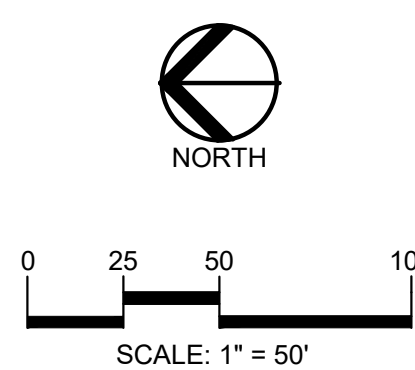
ACTIVE OPEN SPACE (120,142 SF)
 120,142/78 DU = 1,540 SF/DU

OPEN SPACE (5.95 AC)
 5.96/8.14 = 73%

SIDEWALK RAMP LEGEND:
 SIDEWALK RAMP 'TYPE F'

REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

S:\PROJECTS\2020\0151-0181 PLATT ROAD TOWNHOMES -ACTING SITE PLANS (P-3) DW-2020151.dwg



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LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | R RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |

EXISTING

- ELEC.—PHONE—CABLE TV O/L LINE, POLE & GUY WIRE
- UG—CATV—
- UG—PHONE—
- ELEC.—U.S. CABLE, MANHOLE, METER & HANDHOLE
- GAS—VALVE & GAS LINE MARKER
- WATER—MAN, HYD., GATE VALVE, TAPPING BLEEVE & VALVE
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- UNIDENTIFIED STRUCTURE

PROPOSED

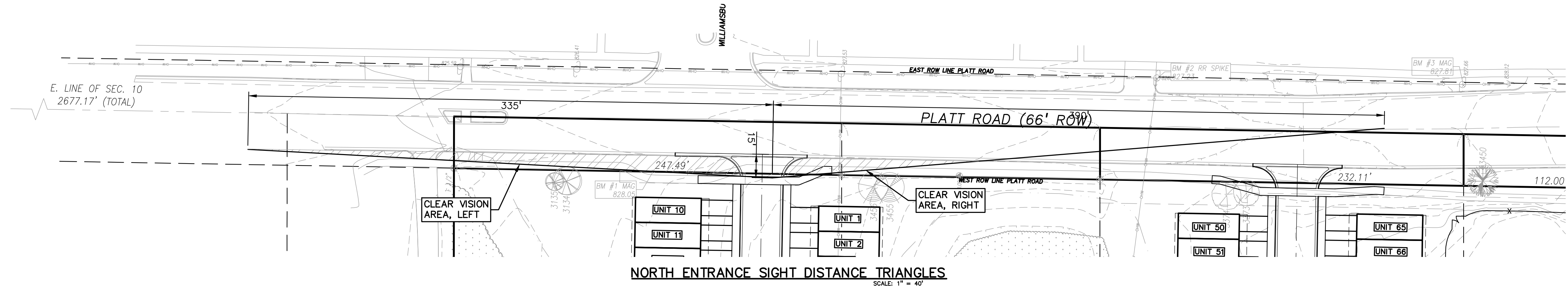
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- UG—PHONE—
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REFERENCE DRAWINGS

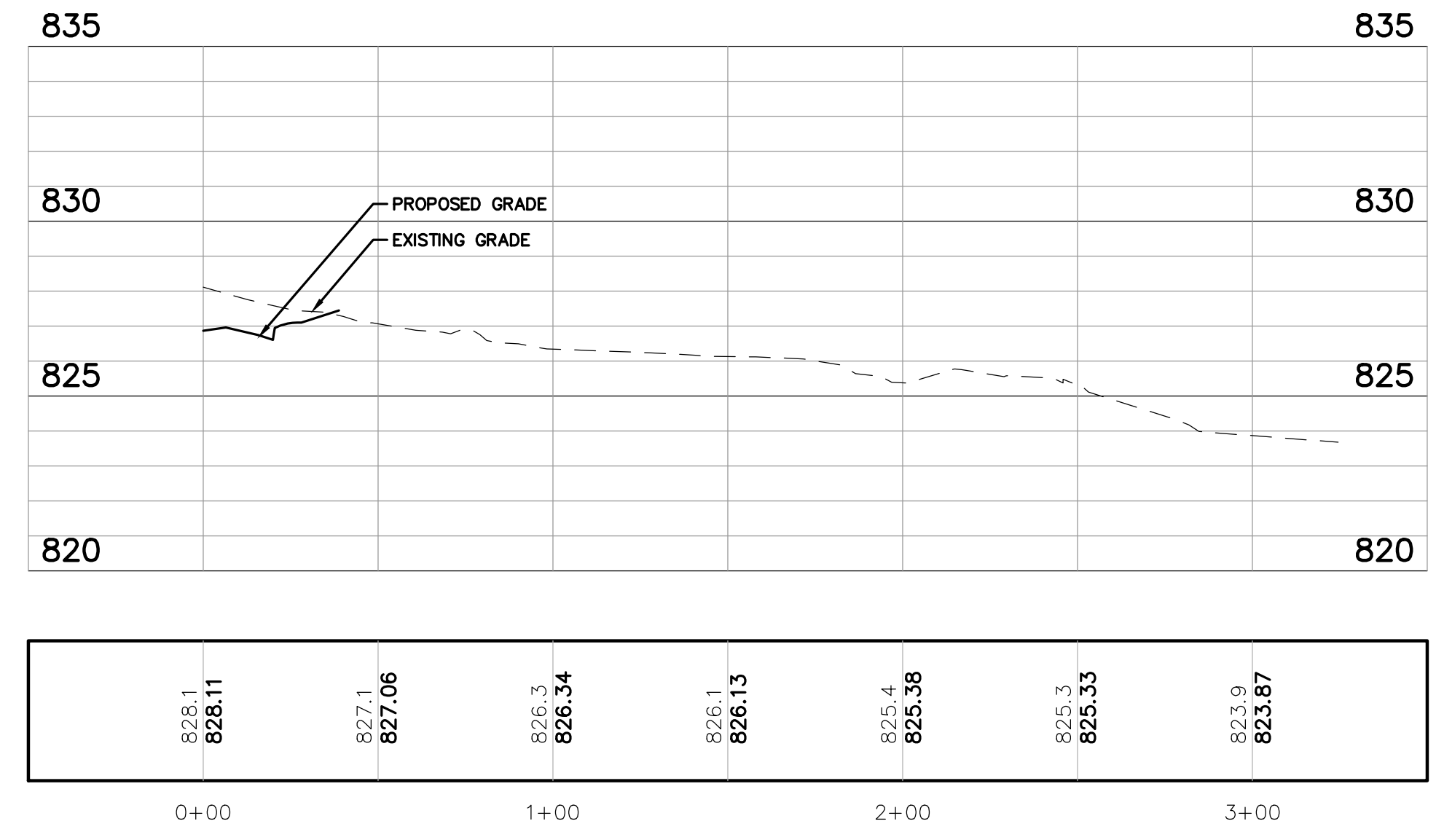
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL SHOULDER
- WETLAND WETLAND
- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY FLOW DUTY ONLY

BENCHMARKS

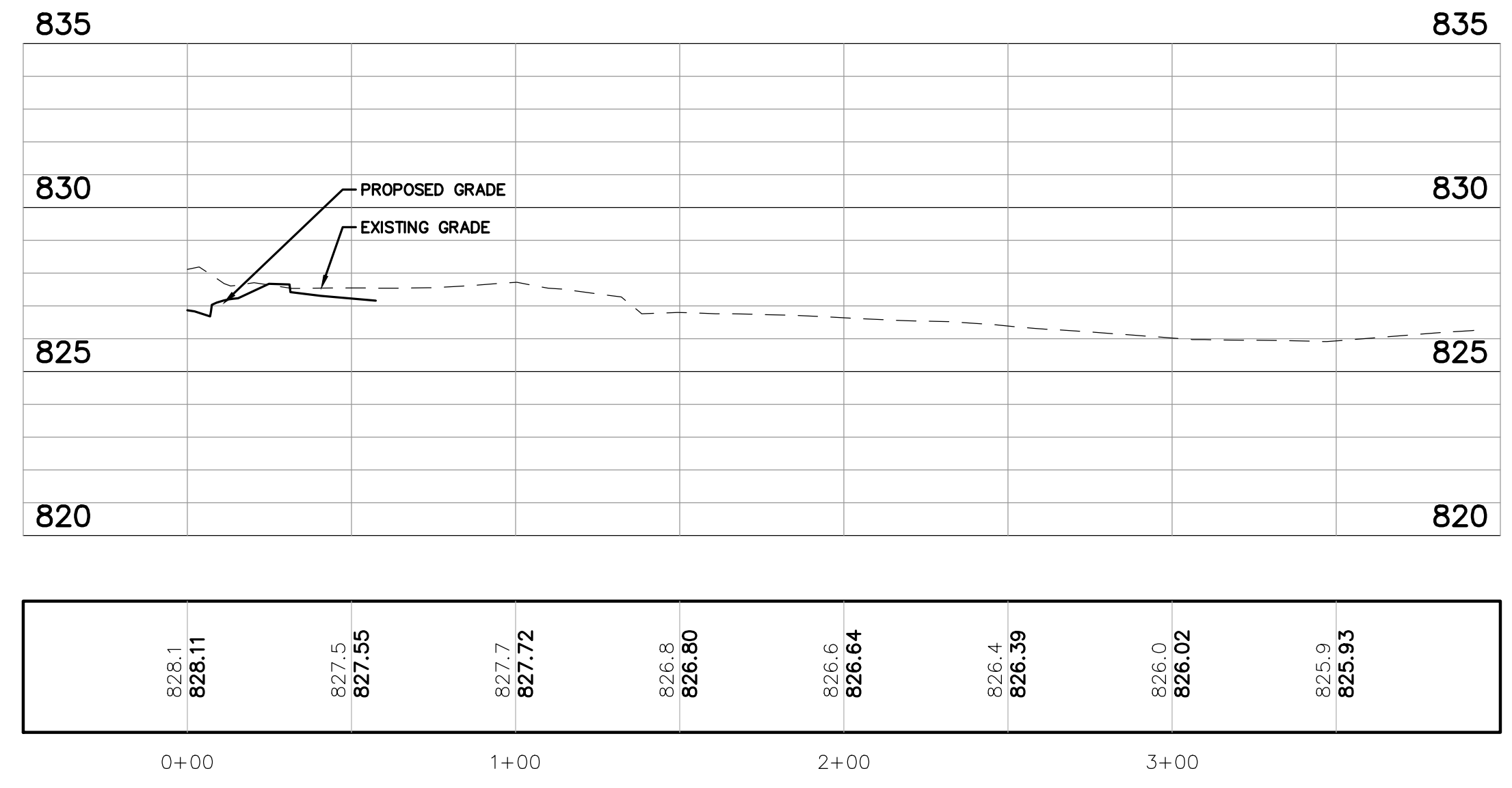
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER
- OTHER



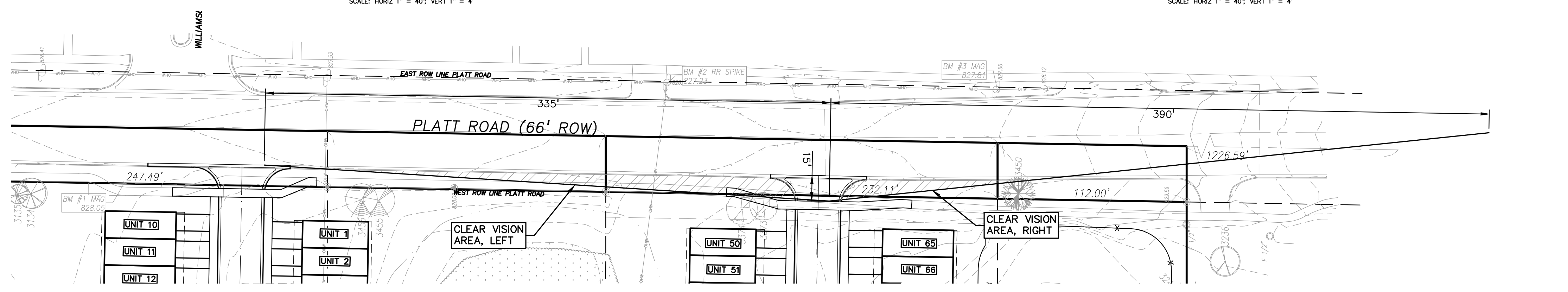
NORTH ENTRANCE SIGHT DISTANCE TRIANGLES
 SCALE: 1" = 40'



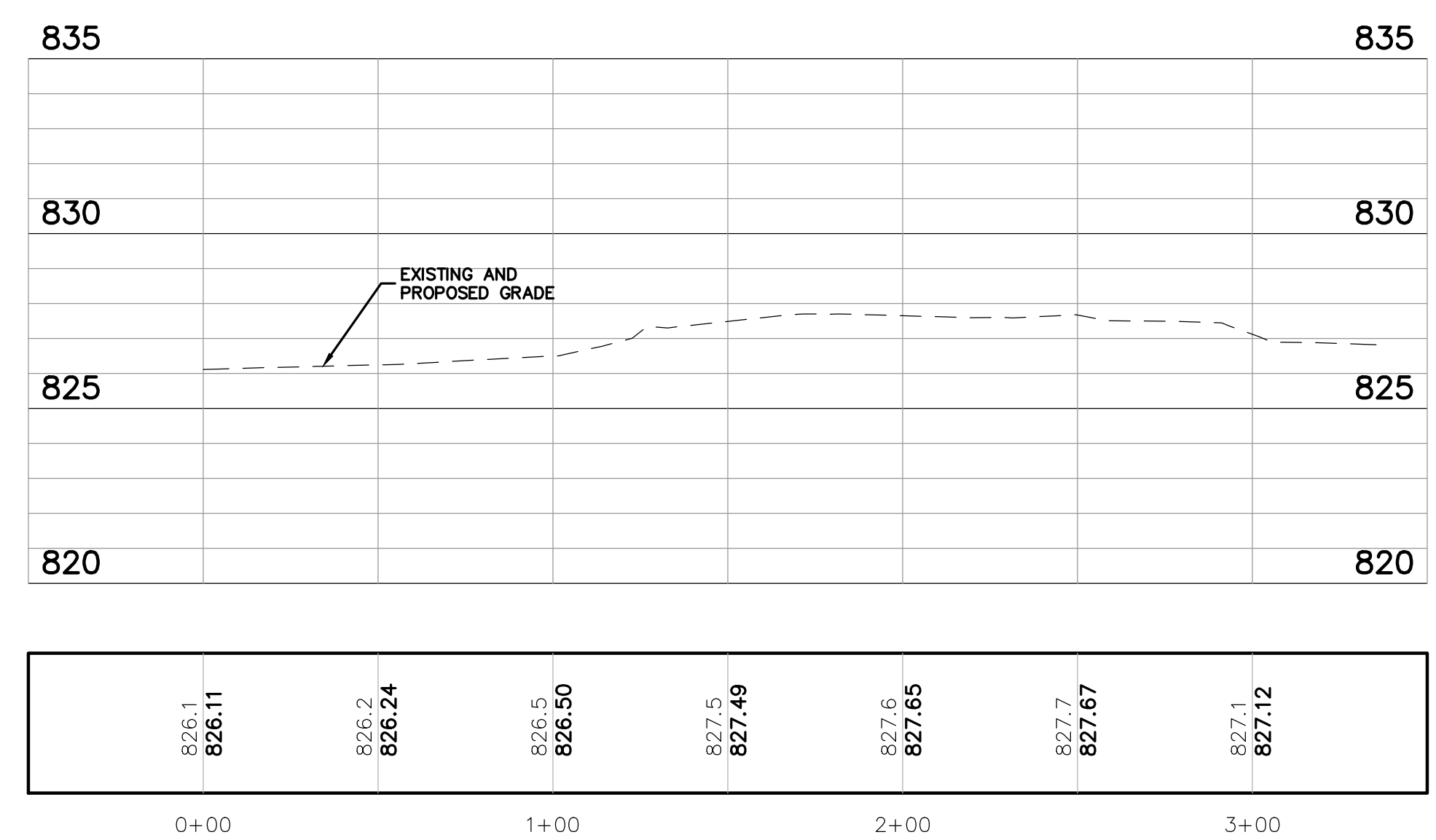
NORTH ENTRANCE LEFT PROFILE
 SCALE: HORIZ 1" = 40'; VERT 1" = 4'



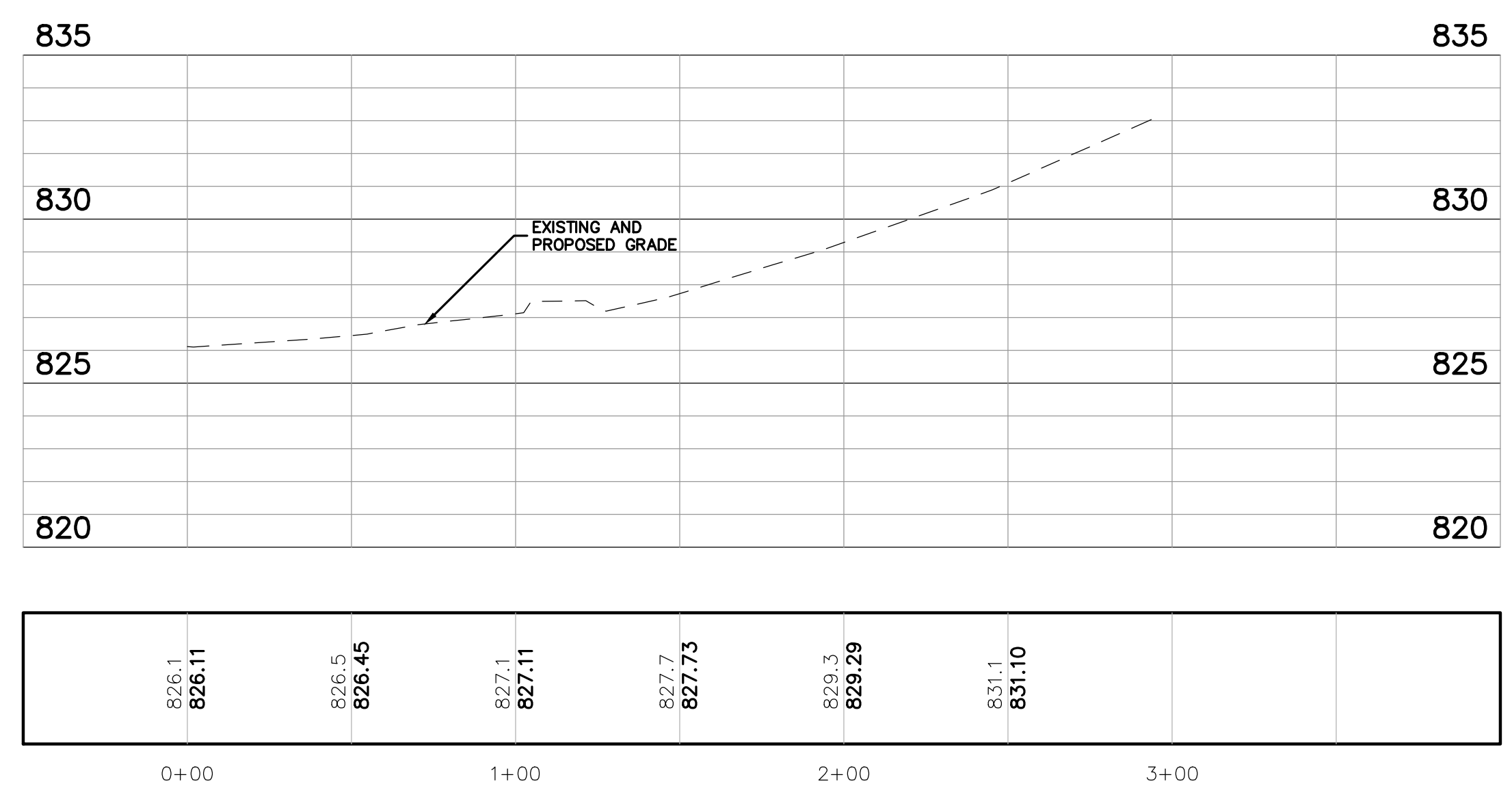
NORTH ENTRANCE RIGHT PROFILE
 SCALE: HORIZ 1" = 40'; VERT 1" = 4'



SOUTH ENTRANCE SIGHT DISTANCE TRIANGLES
 SCALE: 1" = 40'



SOUTH ENTRANCE LEFT PROFILE
 SCALE: HORIZ 1" = 40'; VERT 1" = 4'



SOUTH ENTRANCE RIGHT PROFILE
 SCALE: HORIZ 1" = 40'; VERT 1" = 4'

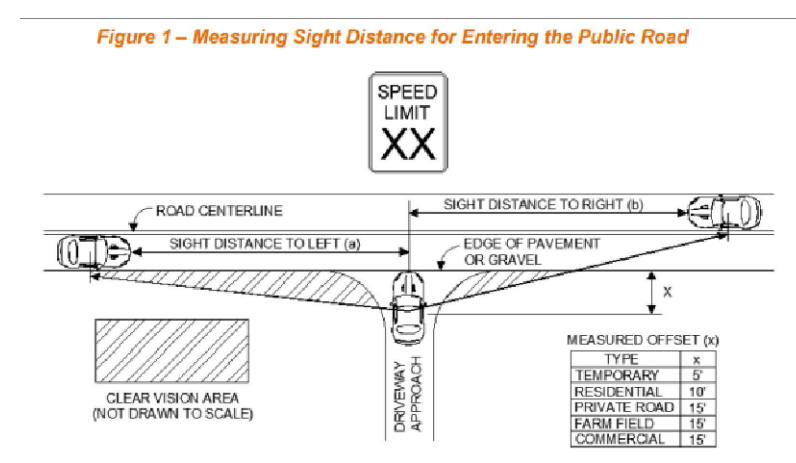


Table 4 - Sight Distance to Left (Based on AASHTO Intersection Control Case B2)

| Speed Limit | Distance (a) Feet |
|-------------|-------------------|
| 25 | 240 |
| 30 | 290 |
| 35 | 335 |
| 40 | 385 |
| 45 | 430 |
| 50 | 480 |
| 55 | 530 |

Table 5 - Sight Distance to Right (Based on AASHTO Intersection Control Case B2)

| Speed Limit | Distance (b) Feet |
|-------------|-------------------|
| 25 | 280 |
| 30 | 335 |
| 35 | 390 |
| 40 | 445 |
| 45 | 500 |
| 50 | 555 |
| 55 | 610 |

CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPA/WC/RWC REVIEW | 1/13/2022 |
| SPA/WC/RWC RESUBMITTAL | 4/7/2022 |
| WC/RWC RESUBMITTAL | 5/3/2022 |
| SPA/WC/RWC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020
 DRAWING TITLE
SIGHT DISTANCE TRIANGLES

PEA JOB NO. 2020-0151
 P.M. JC
 DN. JW
 DES. JW
 DRAWING NUMBER:

S:\PROJECTS\2020-0151 PLATT ROAD TOWNHOMES -\CADD\SITE PLANS\3-2 SIGHT-2020151.dwg



CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
 2817 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

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| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
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| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
ADDRESSING PLAN

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | R RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |

EXISTING

- OH-ELEC-U-G: ELEC. PHONE OR CABLE TV U.G. LINE, POLE & GUY WIRE
- UG-CATV: UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC: ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS VALV: GAS MAN. VALVE & GAS LINE MARKER
- WATERMAN, HYD.: WATERMAN, HYD., GATE VALVE, TAPPING BLEEVE & VALVE
- SANITARY SEWER: SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER: STORM SEWER, CLEANOUT & MANHOLE
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- SQ. ROUN: SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST: POST INDICATOR VALVE
- WATER VALV: WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX: MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED: UNIDENTIFIED STRUCTURE
- SPOT ELEVATION: SPOT ELEVATION
- CONTOUR LINE: CONTOUR LINE
- FENCE: FENCE
- GUARD RAIL: GUARD RAIL
- STREET LIGHT: STREET LIGHT
- SIEN: SIGN

PROPOSED

- CONC.: CONCRETE
- ASPH.: ASPHALT
- GRAVEL: GRAVEL SHOULDER
- WETLAND: WETLAND
- 310: 310 HEAVY FLOW DUTY ONLY
- STD: STD HEAVY DEEP DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN: XXXXXXXXXXXXX
- SANITARY SEWER: XXXXXXXXXXXXX
- STORM SEWER: XXXXXXXXXXXXX
- COMBINED SEWER: XXXXXXXXXXXXX
- ELECTRIC: XXXXXXXXXXXXX
- TELEPHONE: XXXXXXXXXXXXX
- GAS: XXXXXXXXXXXXX
- PETROLEUM: XXXXXXXXXXXXX
- CITY: XXXXXXXXXXXXX
- FLOOD PLAIN: XXXXXXXXXXXXX
- OTHER: XXXXXXXXXXXXX

BENCHMARKS

BM #1
 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE E.O.W. LINE OF PLATT RD.
 ELEVATION: 828.05 NAVD88 DATUM

BM #2
 RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
 ELEVATION: 827.23 NAVD88 DATUM

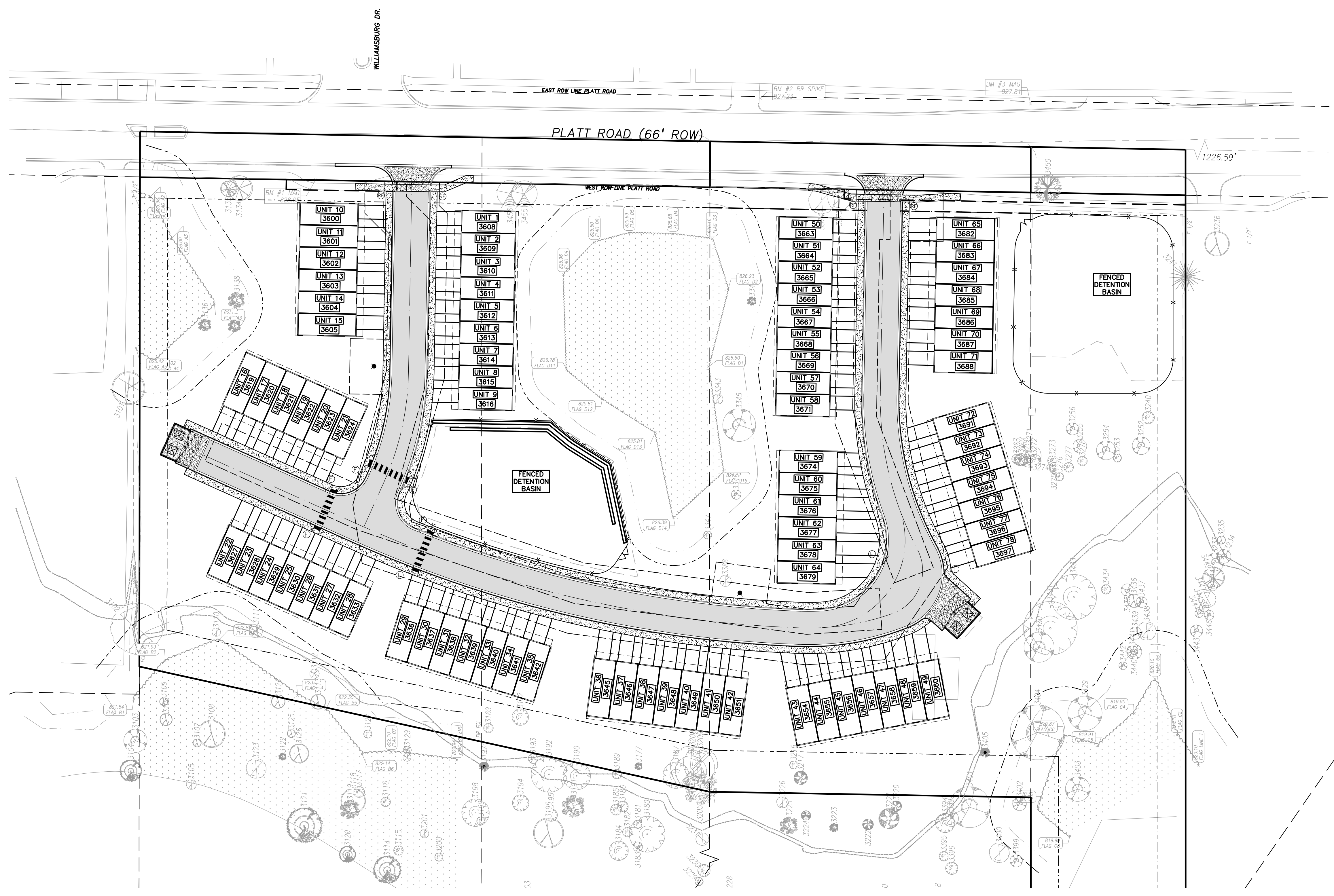
BM #3
 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT ROAD
 ELEVATION: 827.81 NAVD88 DATUM

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 TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

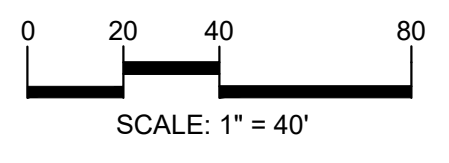
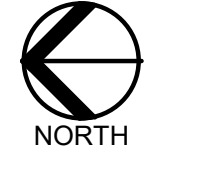
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FLOODPLAIN NOTE:
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| UNIT | STREET ADDRESS | UNIT | STREET ADDRESS |
|------|----------------|------|----------------|
| 1 | 3608 | 40 | 3649 |
| 2 | 3609 | 41 | 3650 |
| 3 | 3610 | 42 | 3651 |
| 4 | 3611 | 43 | 3654 |
| 5 | 3612 | 44 | 3655 |
| 6 | 3613 | 45 | 3656 |
| 7 | 3614 | 46 | 3657 |
| 8 | 3615 | 47 | 3658 |
| 9 | 3616 | 48 | 3659 |
| 10 | 3600 | 49 | 3660 |
| 11 | 3601 | 50 | 3663 |
| 12 | 3602 | 51 | 3664 |
| 13 | 3603 | 52 | 3665 |
| 14 | 3604 | 53 | 3666 |
| 15 | 3605 | 54 | 3667 |
| 16 | 3619 | 55 | 3668 |
| 17 | 3620 | 56 | 3669 |
| 18 | 3621 | 57 | 3670 |
| 19 | 3622 | 58 | 3671 |
| 20 | 3623 | 59 | 3674 |
| 21 | 3624 | 60 | 3675 |
| 22 | 3627 | 61 | 3676 |
| 23 | 3628 | 62 | 3677 |
| 24 | 3629 | 63 | 3678 |
| 25 | 3630 | 64 | 3679 |
| 26 | 3631 | 65 | 3682 |
| 27 | 3632 | 66 | 3683 |
| 28 | 3633 | 67 | 3684 |
| 29 | 3636 | 68 | 3685 |
| 30 | 3637 | 69 | 3686 |
| 31 | 3638 | 70 | 3687 |
| 32 | 3639 | 71 | 3688 |
| 33 | 3640 | 72 | 3691 |
| 34 | 3641 | 73 | 3692 |
| 35 | 3642 | 74 | 3693 |
| 36 | 3645 | 75 | 3694 |
| 37 | 3646 | 76 | 3695 |
| 38 | 3647 | 77 | 3696 |
| 39 | 3648 | 78 | 3697 |



S:\PROJECTS\2020\0151-0181 PLATT ROAD TOWNHOMES - ADDRESSING SITE PLANS (P-3.3) ADDR-200151.dwg



CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

| REVISIONS | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
GRADING PLAN

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ R. RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | ⊙ M. MEASURED |
| ⊗ NAIL & CAP SET | | ⊙ C. CALCULATED |

EXISTING

- OH-ELEC—W—W—W— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV— UG. UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE— UG. TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC—ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS VALVE & GAS LINE MARKER
- WATERMAN, HYD. GATE VALVE, TAPPING BLEEDIE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BODY/DRYANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARDRAIL
- STREET LIGHT
- SIGN

PROPOSED

- CONC. — CONCRETE
- ASPHL — ASPHALT
- GRAVEL — GRAVEL SHOULDER
- WETLAND

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER

BENCHMARKS

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 ELEVATION: 828.05 NAVD88 DATUM

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SYMBOLS: GRADING

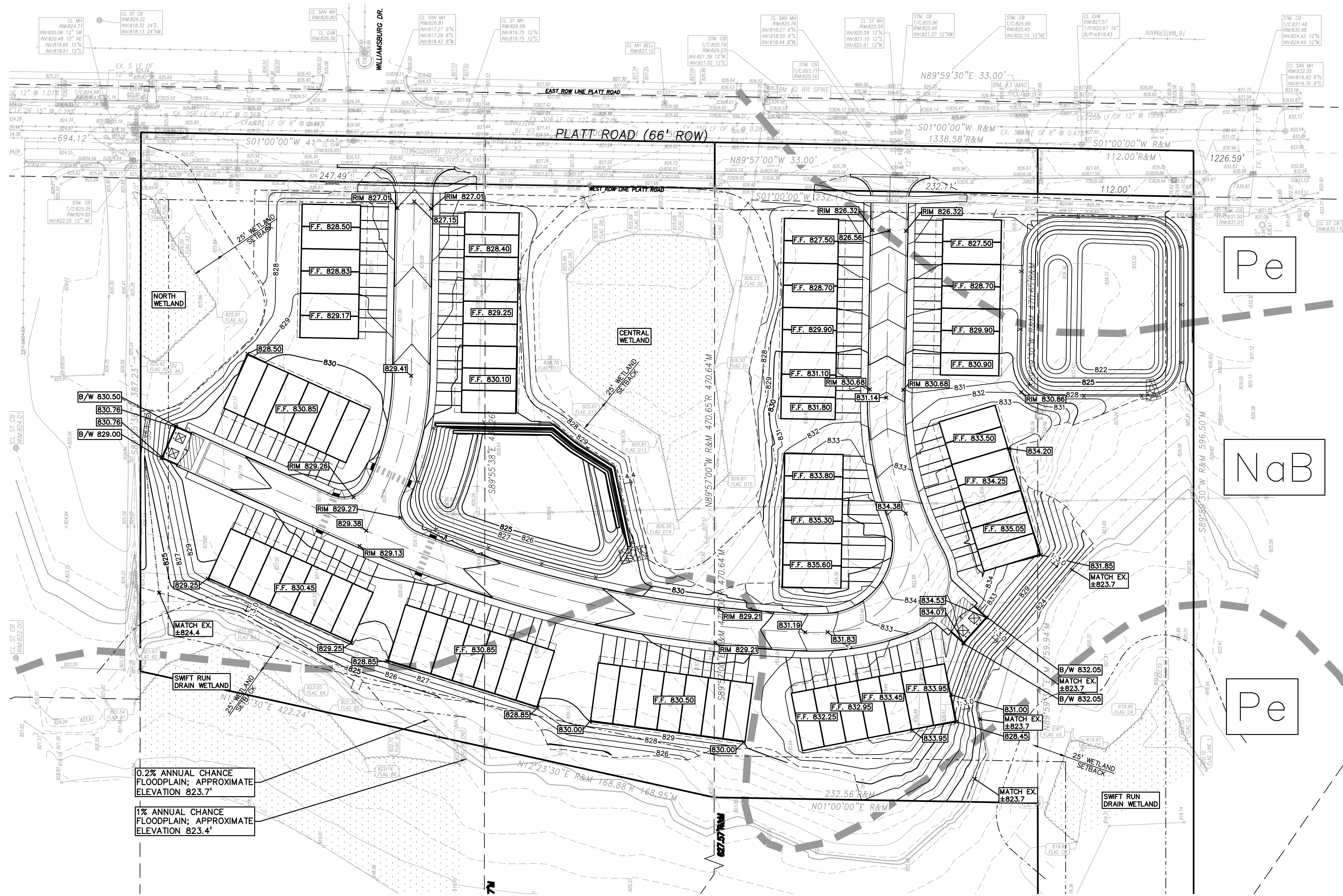
PROPOSED SPOT ELEVATION:
 TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES. — 822.50

PROPOSED CONTOUR LINE — 922

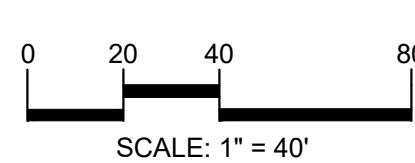
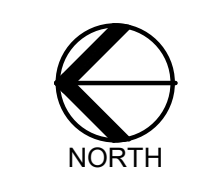
ABBREVIATIONS:
 T/C = TOP OF CURB
 C = GUTTER GRADE
 T/P = TOP OF PAVEMENT
 T/S = TOP OF SIDEWALK
 T/W = TOP OF WALL
 B/W = BOTTOM OF WALL
 F.G. = FINISH GRADE
 RIM = RIM ELEVATION

RETAINING WALL NOTE:
 TOP OF WALL (T/W) AND BOTTOM OF WALL (B/W) GRADES ARE THE FINISH GRADE AT THE TOP AND BOTTOM OF THE RETAINING WALL, NOT THE ACTUAL TOP AND BOTTOM OF THE WALL STRUCTURE.

SOIL INVESTIGATION
 PER THE US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOILS MAP FOR WASHINGTON COUNTY, SITE SOILS CONSIST OF:
 NaB — NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/D
 Pe — PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/D



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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

| REVISIONS | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
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| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
ROAD PROFILES

PEA JOB NO. 2020-0151

P.M. JC

DN. JW

DES. JW

DRAWING NUMBER:

P-4.1

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | R RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |

EXISTING

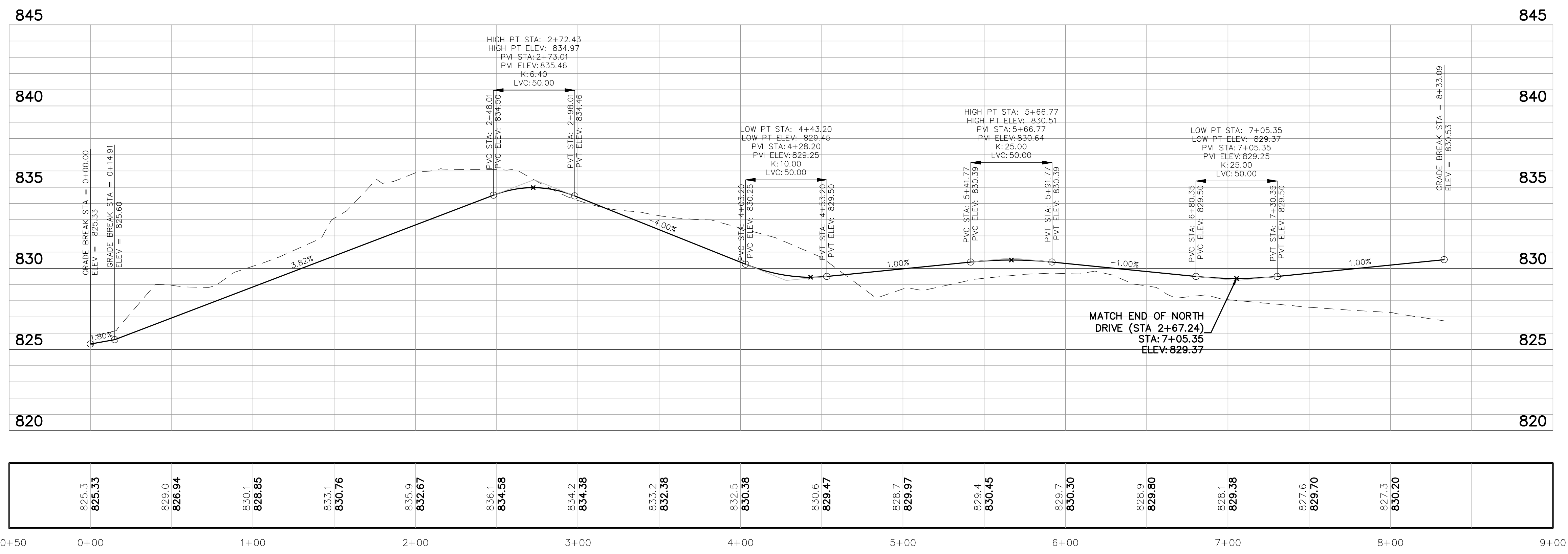
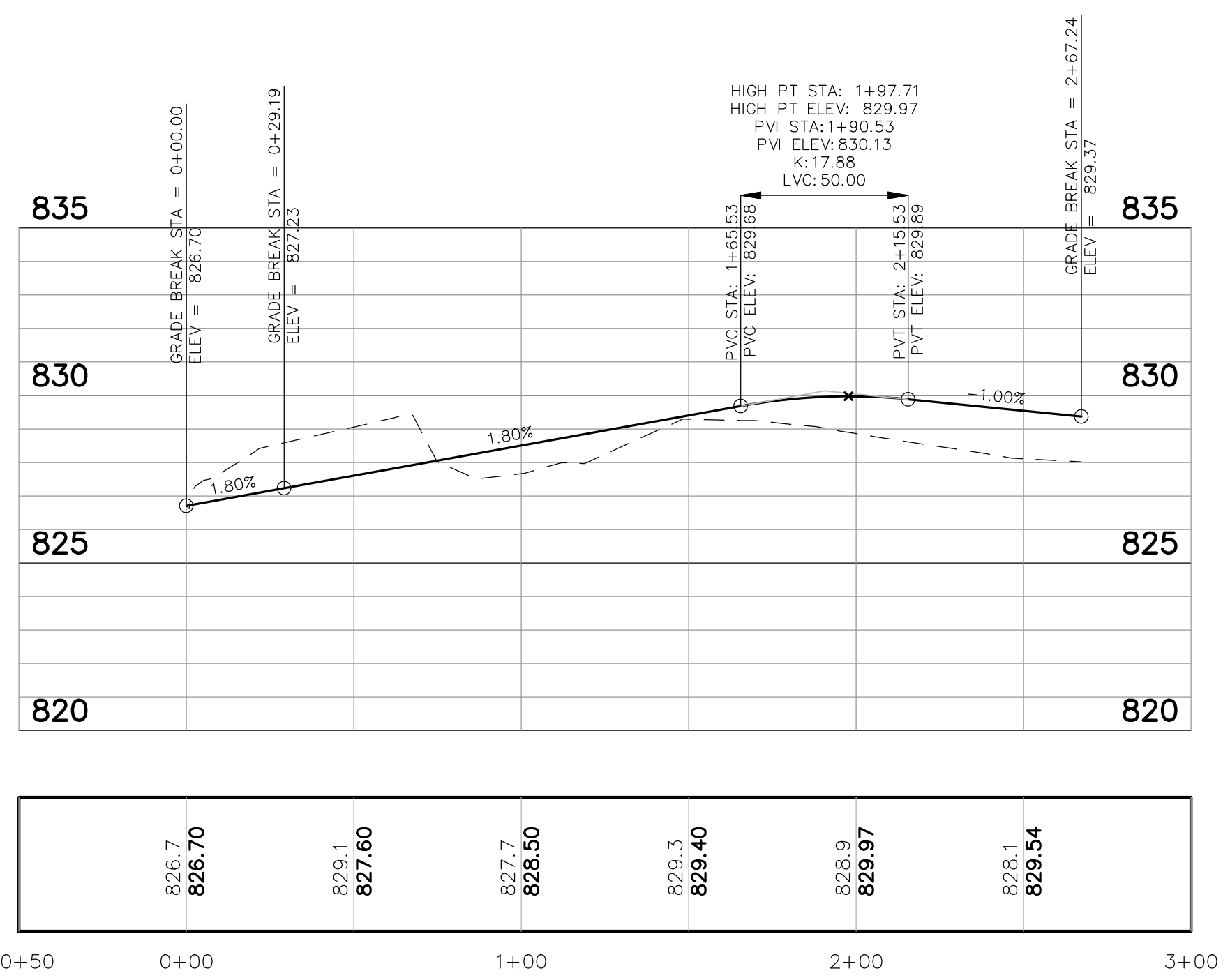
- OH—ELEC—W—ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG—CATV—E—UNDERGROUND CABLE TV, CATV PEDESTAL
- UG—PHONE—E—TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG—ELEC—E—ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS—VALVE & GAS LINE MARKER
- WATER—HYD.—GATE VALVE, TAPPING BLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- ROST INDICATOR VALVE
- WATER VALVE BODY/DRYANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN

PROPOSED

- CONC.—CONCRETE
- ASPH.—ASPHALT
- GRAVEL—GRAVEL SHOULDER
- WETLAND
- 3TD—HEAVY R.O.W. DUTY ONLY
- STD—HEAVY R.O.W. DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER
- OTHER



EROSION CONTROL STANDARDS:

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AGENCY UNDER PART 91 OF ACT 451 OF 1994, AS AMENDED.
2. DAILY INSPECTIONS SHALL BE MADE BY CONTRACTOR WHILE WORKING TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY. ALL SOIL EROSION CONTROL PROVISIONS SHALL BE PROPERLY MAINTAINED DURING CONSTRUCTION.
3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
4. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGE AREAS HAVE BEEN COMPLETED.
5. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
6. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
7. DUST SHALL BE CONTROLLED BY WATERING OR BY OTHER APPROVED MEANS THROUGHOUT ALL CONSTRUCTION OPERATIONS.

8. PERMANENT SOIL EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 5 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
9. THE CONTRACTOR SHALL PRESERVE NATURAL VEGETATION AS MUCH AS POSSIBLE.
10. ANY WORK OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REQUIRE A SEPARATE GRADING PERMIT.
11. FOLLOWING THE PLACEMENT OF 4" OF TOPSOIL AND HYDROSEED, STRAW MULCH BLANKET IS TO BE INSTALLED PERPENDICULAR ALONG THE PROPOSED SLOPES 1:4 OR STEEPER FROM TOP OF SLOPE TO TOE OF SLOPE, INCLUDING DITCH BOTTOMS, AND IT MUST BE PEGGED IN PLACE.
12. ALL MUD/DIRT TRACKED ONTO EXISTING COUNTY/CITY ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
13. TEMPORARY STABILIZATION OF THE ENTIRE SITE SHALL BE COMPLETED AND APPROVAL OBTAINED FROM THE CITY OF ANN ARBOR

SOIL EROSION MAINTENANCE SCHEDULE AND NOTES:

1. THE CONTRACTOR SHALL INSPECT THE SOIL EROSION AND SEDIMENTATION CONTROL DEVICES ONCE EACH WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. THE FOLLOWING STEPS SHALL BE IMPLEMENTED IF ANY DAMAGE HAS OCCURRED.
2. ANY DEBRIS OR DIRT ON ANY PAVED AREA RESULTING FROM CONSTRUCTION TRAFFIC SHALL BE CLEANED IN A PROMPT MANNER BY THE CONTRACTOR. THE CONSTRUCTION DRIVE SHALL BE CLEANED AT THE END OF EACH DAY.
3. ALL DIRT AND MUD TRACKED ONTO PAVED AREAS SHALL BE REMOVED DAILY BY SCRAPING. STREET SWEEPING IS REQUIRED WEEKLY.
4. SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR REBACKFILL THE SILTATION FENCE SHOULD IT FALL OR BE DAMAGED DURING CONSTRUCTION.
5. INLET FILTER MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY ACCUMULATED SILT OR OTHER DEBRIS. THE REMOVAL OF SILT SHOULD BE WITH THE USE OF A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL IF INLET FILTERS CAN NOT BE CLEANED OR ARE DAMAGED, THEN THE FABRIC MUST BE REPLACED.
6. A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN THE SITE ON A DAILY BASIS AS REQUIRED TO MAINTAIN DUST CONTROL.

| SEQUENCE OF CONSTRUCTION | | |
|--------------------------|---------|--|
| START DAY | END DAY | ACTIVITY |
| 1 | 1 | CITY OF ANN ARBOR SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING |
| 2 | 300 | INSTALL TEMPORARY SOIL EROSION CONTROL MEASURES, SILT FENCES, INLET FILTERS, ETC. AS NECESSARY. |
| 5 | 30 | REMOVE ALL VEGETATION, TREES AND BRUSH FROM THE AREA OF PROPOSED IMPROVEMENT UNLESS MARKED TO REMAIN. STRIP AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE GRADED AND SEEDED. |
| 5 | 65 | DEMOLISH ALL PAVEMENT, SIDEWALK, AND UTILITIES AS REQUIRED TO INSTALL THE PROPOSED WORK. |
| 5 | 75 | DISPOSE OF ALL EXCESS/UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO ON-SITE BURN OR BURY PITS ALLOWED. |
| 30 | 90 | ROUGH GRADE SITE. SEED AND MULCH BLANKETS MUST BE INSTALLED AS SHOWN WITHIN 5 DAYS OF FINAL GRADE. REPAIR AND/OR RE-INSTALL ANY TEMPORARY SOIL EROSION CONTROL MEASURES THAT WERE DAMAGED DURING GRADING OPERATIONS. |
| 40 | 240 | TEMPORARY SEEDING MUST BE PROVIDED IN AREAS NOT TO BE WORKED ON FOR 14 DAYS OR LONGER. |
| 45 | 105 | CONSTRUCT AND STABILIZE DETENTION FACILITIES |
| 45 | 120 | INSTALL SITE UTILITIES (STORM, SANITARY, WATER MAIN, ETC.) INSTALL INLET FILTERS AT NEW DRAINAGE STRUCTURES. |
| 100 | 110 | WATER MAIN FLUSHING |
| 150 | 175 | FINE GRADE SITE AND PREPARE FOR SITE PAVING OPERATIONS. |
| 175 | 205 | INSTALL FIRST COURSE OF PAVEMENT, SIDEWALKS, CURBING AS PROPOSED. IF PERMANENT LANDSCAPING IS NOT TO BE INSTALLED SOON AFTER PAVING IS COMPLETE, ALL AREAS WITHIN 20 FEET OF BACK OF CURB MUST BE TEMPORARILY SEEDED. REPAIR INLET FILTERS, SILT FENCE AND ANY OTHER DAMAGED SOIL EROSION CONTROL MEASURES AS NECESSARY. |
| 205 | 270 | CONSTRUCT PROPOSED BUILDINGS |
| 270 | 280 | INSTALL FINAL PAVEMENT COURSE |
| 280 | 290 | FINAL GRADE, REDISTRIBUTE STOCKPILED TOPSOIL, ESTABLISH VEGETATION AND INSTALL ALL PERMANENT LANDSCAPING IN ALL DISTURBED AREAS NOT BUILT. |
| 290 | 295 | CLEAN PAVEMENT AND REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. RE-ESTABLISH VEGETATION AS REQUIRED. |
| 300 | 300 | REMOVE SEDIMENTATION CONTROLS ONCE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED AND THE CITY OF ANN ARBOR APPROVES THE FINAL GRADING |

LEGEND

EXISTING: IRON FOUND, IRON SET, NAIL FOUND, NAIL & CAP SET, BRASS PLUG SET, MONUMENT FOUND, MONUMENT SET, RECORDED, MEASURED, CALCULATED.

PROPOSED: ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE, UNDERGROUND CABLE TV, CATV PEDESTAL, TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE, ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE, GAS MAIN, VALVE & GAS LINE MARKER, WATERMAIN, HYD. GATE VALVE, TAPPING BLEEVE & VALVE, SANITARY SEWER, CLEANOUT & MANHOLE, STORM SEWER, CLEANOUT & MANHOLE, COMBINED SEWER & MANHOLE, SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN, POST INDICATOR VALVE, WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF, MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE, UNIDENTIFIED STRUCTURE, SPOT ELEVATION, CONTOUR LINE, FENCE, GUARDRAIL, STREET LIGHT, SIGN, CONC., ASPHALT, GRAVEL SHOULDER, WETLAND.

REFERENCE DRAWINGS: WATER MAIN, SANITARY SEWER, STORM SEWER, COMBINED SEWER, ELECTRIC, TELEPHONE, GAS, PETROLEUM, CATV, FLOOD PLAIN, OTHER.

BENCHMARKS: BM #1, BM #2, BM #3.

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SYMBOLS: EROSION CONTROL: SILT FENCE, FOUR FOOT, ORANGE, CONSTRUCTION FENCE, STORM SEWER INLET FILTER, TEMPORARY CONSTRUCTION ACCESS DRIVE, EROSION CONTROL BLANKET.

SOIL INVESTIGATION: NaB - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES; Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES.

PEA GROUP

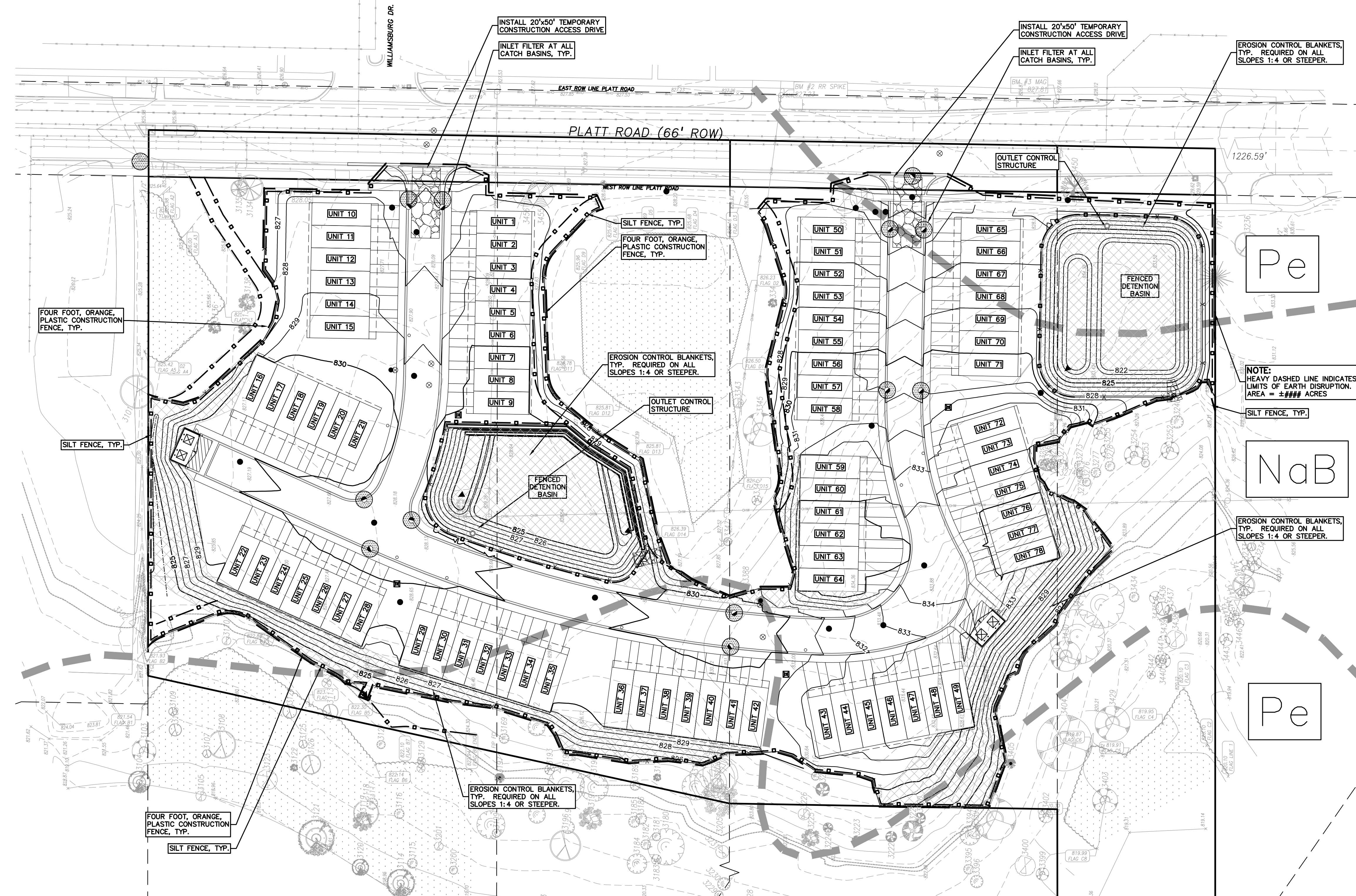
TROY • WASHINGTON TWP
BRIGHTON • DETROIT
T: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
JOSEPH B. WYWIOR
No. 45874
ENGINEER

0 20 40 80
SCALE: 1" = 40'

811 Know what's below. Call before you dig.

CAUTION!! THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



EROSION CONTROL COST ESTIMATE (CONSTRUCTION)

| | | | |
|--|--------------|---------|-----------------|
| INSTALL SILT FENCE | 2,817 LF. | \$1.60 | \$4,508 |
| INSTALL INLET FILTERS | 16 EA. | \$120 | \$1,920 |
| INSTALL TEMPORARY ACCESS DRIVES | 2 EA. | \$1,200 | \$2,400 |
| TEMPORARY SEEDING | ±12,500 S.Y. | \$1.05 | \$13,125 |
| INSTALL TEMP. END SECTION SED. TRAP | 5 EA. | \$120 | \$600 |
| INSTALL EROSION CONTROL BLANKET | 5,528 S.Y. | \$5.00 | \$27,640 |
| EXPOSED SOIL PROTECTION FROM EROSION SHOULD CONSTRUCTION DISCONTINUE | ±24,028 S.Y. | \$1.15 | \$27,632 |
| TOTAL | | | \$77,825 |

TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

CLIENT: TROWBRIDGE COMPANIES

PROJECT TITLE: **PLATT ROAD TOWNHOMES**
PLATT ROAD
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS:

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

DRAWING TITLE: **SOIL EROSION CONTROL PLAN**

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW

DRAWING NUMBER: **P-5.0**

S:\PROJECTS\2020\2020-0151 PLATT ROAD TOWNHOMES -ACTING SITE PLANS (P-5) SEC-202010.dwg

- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES, TRENCHES, AND BACKFILLING SHALL CONFORM WITH THE STANDARDS AND REQUIREMENTS OF THE CITY OF ANN ARBOR STANDARD SPECIFICATIONS.
 - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR.
 - REFER TO SHEET P-8.0 FOR ADDITIONAL UTILITY DETAILS AND NOTES.
 - ALL WATER MAIN AND FITTINGS (4" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54, AND SHALL BE POLYETHYLENE WRAPPED PER ANS/AWWA C105/A21.5.
 - ALL WATER MAIN SHALL BE PROVIDED WITH 5.5" OF COVER UNLESS OTHERWISE NOTED.
 - ALL FIRE HYDRANTS SHALL MEET THE REQUIREMENTS OF DIVISION III, SECTION 2H, OF THE CITY OF ANN ARBOR STANDARD SPECIFICATIONS. THE EJM MODEL 5-BR SATISFIES THE REQUIREMENTS. TRAFFIC FLANGES SHALL BE PER THE CITY OF ANN ARBOR SPECIFICATIONS.
 - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE CITY OF ANN ARBOR.
 - THE WATER MAIN CONTRACTOR SHALL NOTIFY THE CITY OF ANN ARBOR PROJECT MANAGEMENT UNIT AT (734) 794-8410 AT LEAST THREE WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION. INSPECTION SERVICES SHALL BE ARRANGED THROUGH TECHNICIAN SUPERVISOR, DAVE CLEMONS, AT (734) 219-2909.
 - THE CITY OF ANN ARBOR STANDARD DETAILS ARE INCORPORATED INTO AND MADE A PART OF THESE PLANS. CONTRACTOR TO REFER TO THE CITY OF ANN ARBOR STANDARD DETAIL SHEETS FOR ALL STRUCTURE, PIPE MATERIALS, BEDDING, TESTING, ETC. NOTES AND DETAILS.
 - HYDRANTS SHALL BE CENTERED A MINIMUM 4' AND MAXIMUM 10' FROM THE FACE OF CONCRETE CURB OR PAVEMENT EDGE, TYP.
 - SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 PIPE AND FITTINGS. ALL JOINTS SHALL BE BELL AND SPIGOT RUBBER O-RING GASKET.

- CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES WITHIN THE SCHEDULED WORK AREA, AND NOTIFY THE OWNER AND/OR ENGINEER IF PROBLEMS ARE FORESEEABLE WITH THE PROPOSED CONSTRUCTION.
- SEE SHEET P-7.0 FOR STORM SEWER AND DETENTION CALCULATIONS.
- INDIVIDUAL UNITS WILL NOT BE FIRE SUPPRESSED. TWO HOUR FIRE RATED WALLS ARE PROPOSED BETWEEN THE UNITS IN THE PROPOSED BUILDINGS. REFER TO ARCHITECTURAL FLOOR PLANS FOR DETAILS.
- BOOSTER PUMPS WILL NOT BE USED FOR THE BUILDING WATER SERVICE LEADS.
- HYDRANT COVERAGE NOTE:** HYDRANTS PROVIDING PROTECTION COVERAGE FOR THE BUILDING SHALL BE IN SERVICE AND APPROVED BY PLANNING, ENGINEERING, AND FIRE DEPARTMENT BEFORE FIRE DEPARTMENT WILL SUPPORT PERMIT ISSUANCE FOR NEW CONSTRUCTION PHASE AND BEFORE COMBUSTIBLE MATERIALS ARE PLACED ON THE JOB SITE. HYDRANTS SHALL BE IN SERVICE THROUGHOUT CONSTRUCTION.
- SAND BACKFILL NOTE:** ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF THE PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAXIMUM DRY DENSITY (ASTM D-1557).
- UTILITY CONSTRUCTION NOTE:** WATER MAIN CONSTRUCTION SHALL CONFORM TO DIVISION IV, SECTION 3 OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS. ALL SEWER CONSTRUCTION SHALL CONFORM TO DIVISION IV, SECTION 2 OF THE SPECIFICATIONS.
- SANITARY SEWER NOTE:** SANITARY SEWER DEPTHS SHALL MEET THE CITY OF ANN ARBOR'S REQUIREMENTS AND WILL BE DOCUMENTED ON THE FINAL ENGINEERING PLANS.
- LEGAL DESCRIPTION OF PROPOSED PUBLIC WATER MAIN EASEMENT WILL BE PROVIDED WITH CONSTRUCTION DRAWINGS AND ENGINEERING PLAN SUBMITTALS AS REQUIRED.
- STORAGE AREA FOR CONSTRUCTION MATERIALS SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
- ALL DOMESTIC SERVICE LEADS SHALL BE 2" DIAMETER PIPE.

DEVELOPMENT SEWAGE FLOW OFFSET MITIGATION PROGRAM:

EXISTING:
THERE IS NO EXISTING FLOW FROM THIS PARCEL.

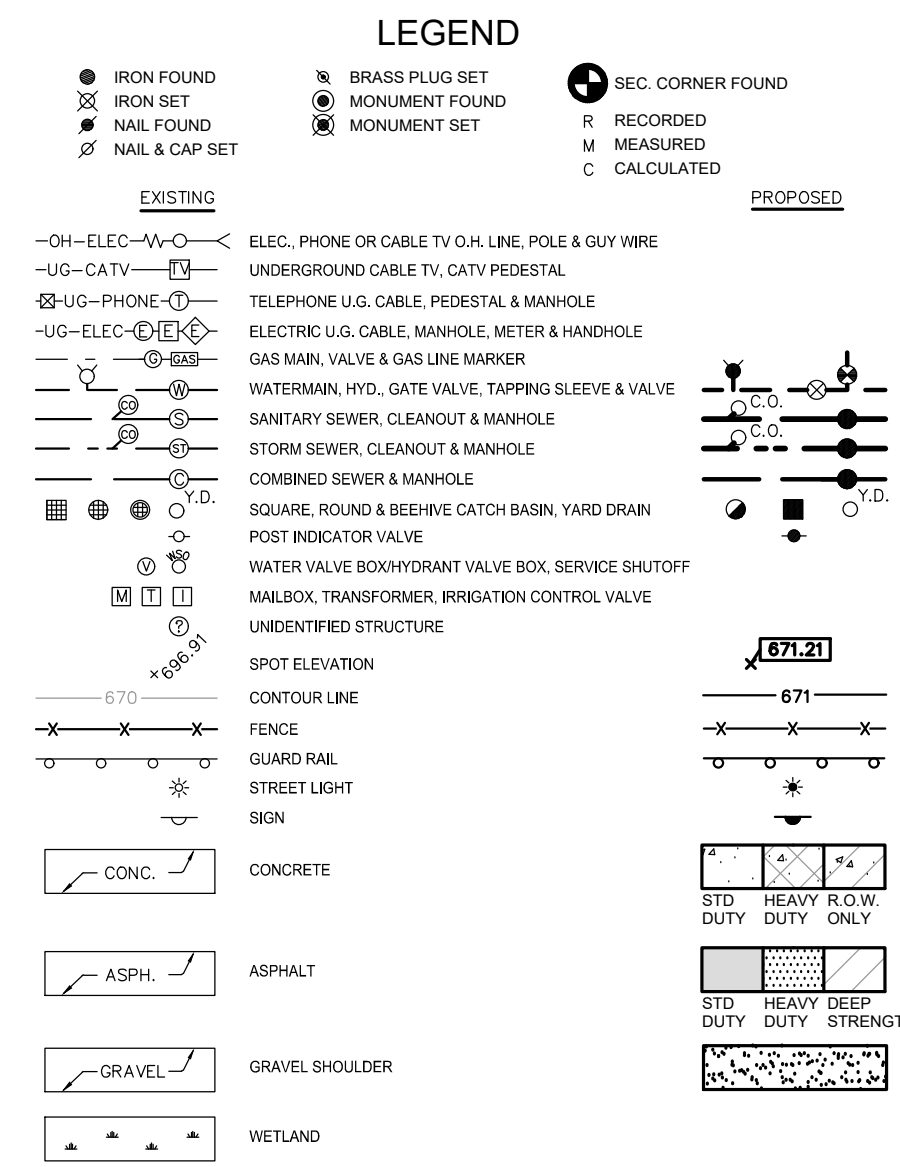
PROPOSED:
78 TOWNHOUSE UNITS WITH GROSS FLOOR AREAS GREATER THAN 1,200 SF EACH.
78 UNITS x 300 GPD/UNIT = 23,400 GPD
PEAK FLOW = 23,400 GPD x 4 (PEAKING FACTOR) x 1.1 (SYSTEM RECOVERY FACTOR) = 102,960 GPD
102,960 GPD x 1 DAY/24 HRS x 1 HR/60 MIN = 71.50 GPM PEAK FLOW
TOTAL PEAK FLOW = 72 GPM TO BE MITIGATED
PER THE CITY OF ANN ARBOR "SANITARY FLOW OFFSET MITIGATION FOR DEVELOPMENT" (2/12/2019)

SANITARY SEWER BASIS OF DESIGN:
PROPOSED TOWNHOUSE UNITS:
78 TOWNHOUSE UNITS
AVERAGE DAILY FLOW = 275 GPD/UNIT x 78 UNITS = 21,450 GPD
TOTAL AVERAGE DAILY FLOW = 21,450 GPD
21,450 GPD = 0.0332 CFS

EQUIVALENT POPULATION = 21,450 GPD / 100 GPD/PERSON = 214.5 PEOPLE = 215 PEOPLE
RESIDENTIAL EQUIVALENT UNITS = 21,450 GPD / 350 GPD/REU = 61.3 REU = 62 REU
P = 215 / 1000 = 0.215

PEAKING FACTOR = $(18 + \sqrt{0.215}) / (4 + \sqrt{0.215}) = (18 + \sqrt{0.215}) / (4 + \sqrt{0.215}) = 4.46$
PEAK HOUR FLOW = 4.46 x 21,450 GPD = 95,667 GPD = 0.148 CFS
CAPACITY OF 8" PVC PIPE @ 0.50% = 1.11 CFS (>0.148 CFS)

NOTE: P = POPULATION IN THOUSANDS

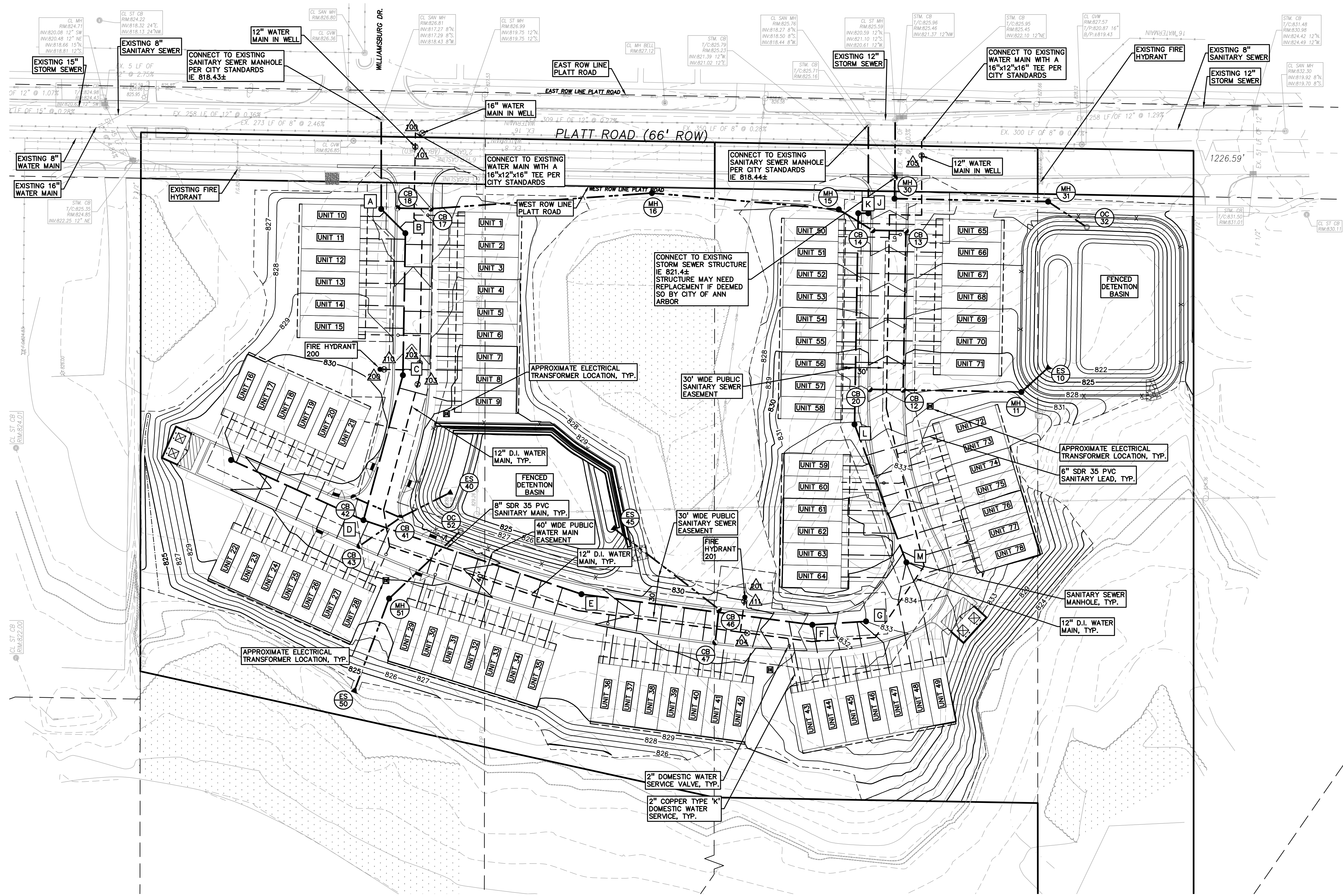


PEA GROUP
TROY • WASHINGTON TWP
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T: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
JOSEPH B. WYWROT
No. 45874
REGISTERED PROFESSIONAL ENGINEER

NORTH

0 20 40 80
SCALE: 1" = 40'



REFERENCE DRAWINGS

| | |
|----------------|--------------|
| WATER MAIN | XXXXXXXXXXXX |
| SANITARY SEWER | XXXXXXXXXXXX |
| STORM SEWER | XXXXXXXXXXXX |
| COMBINED SEWER | XXXXXXXXXXXX |
| ELECTRIC | XXXXXXXXXXXX |
| TELEPHONE | XXXXXXXXXXXX |
| GAS | XXXXXXXXXXXX |
| PETROLEUM | XXXXXXXXXXXX |
| CATV | XXXXXXXXXXXX |
| FLOOD PLAIN | XXXXXXXXXXXX |
| OTHER | XXXXXXXXXXXX |
| OTHER | XXXXXXXXXXXX |

BENCHMARKS

- BM #1**
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD.
ELEVATION: 828.05 NAVD88 DATUM
- BM #2**
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
ELEVATION: 827.23 NAVD88 DATUM
- BM #3**
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD.
ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:

TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.
PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE:

BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

UTILITY NOTES

SEE SHEET P-7.0 FOR STORM SEWER STRUCTURE INFORMATION.

SANITARY STRUCTURES

| | |
|---|--|
| A | MH (4" DIA.) RIM = 827.68 8" SW 820.18 12" E 818.75 |
| B | MH (4" DIA.) RIM = 827.45 8" W 820.40 8" NE 820.30 |
| C | MH (4" DIA.) RIM = 829.28 8" W 821.01 8" E 820.91 |
| D | MH (4" DIA.) RIM = 829.34 8" S 821.65 8" NE 821.65 8" E 821.55 |
| E | MH (4" DIA.) RIM = 830.28 8" S 822.58 8" N 822.48 |
| F | MH (4" DIA.) RIM = 831.29 8" S 823.52 8" N 823.42 |

SANITARY STRUCTURES

| | |
|---|--|
| G | MH (4" DIA.) RIM = 832.98 8" N 823.71 |
| H | MH (4" DIA.) RIM = 830.21 8" SW 822.17 |
| J | MH (4" DIA.) RIM = 828.20 8" N 820.26 8" E 818.76 |
| K | MH (4" DIA.) RIM = 826.50 8" W 820.40 8" S 820.30 |
| L | MH (4" DIA.) RIM = 832.13 8" W 821.26 8" E 821.16 |
| M | MH (4" DIA.) RIM = 834.87 8" E 821.79 |

WATER MAIN STRUCTURES

| | |
|-----|----------------------------|
| 100 | CV IN WELL RIM = 827.27 |
| 101 | CV IN WELL RIM = 827.11 |
| 102 | CV IN WELL RIM = 829.12 |
| 103 | CV IN WELL RIM = 829.41 |
| 104 | CV IN WELL RIM = 829.66 |
| 105 | CV IN WELL RIM = 825.87 |
| 110 | CV IN BOX RIM = 829.52 |
| 111 | CV IN BOX RIM = 829.91 |

HYDRANTS

| | |
|-----|-----------------------------------|
| 200 | HYDRANT ASSEMBLY F.G. = 829.61 |
| 201 | HYDRANT ASSEMBLY F.G. = 830.31 |

CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
UTILITY PLAN

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

S:\PROJECTS\2020\2020-0151 PLATT ROAD TOWNHOMES -ACTING SITE PLANS (P-6) UTILITY-2020151.dwg



0 20 40 80
 SCALE: 1" = 40'



CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
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| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
FIRE PROTECTION PLAN

PEA JOB NO. 2020-0151
 P.M. JC
 DN. JW
 DES. JW
 DRAWING NUMBER:

P-6.1

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | ⊙ MEASURED |
| ⊗ NAIL & CAP SET | | ⊙ CALCULATED |

EXISTING

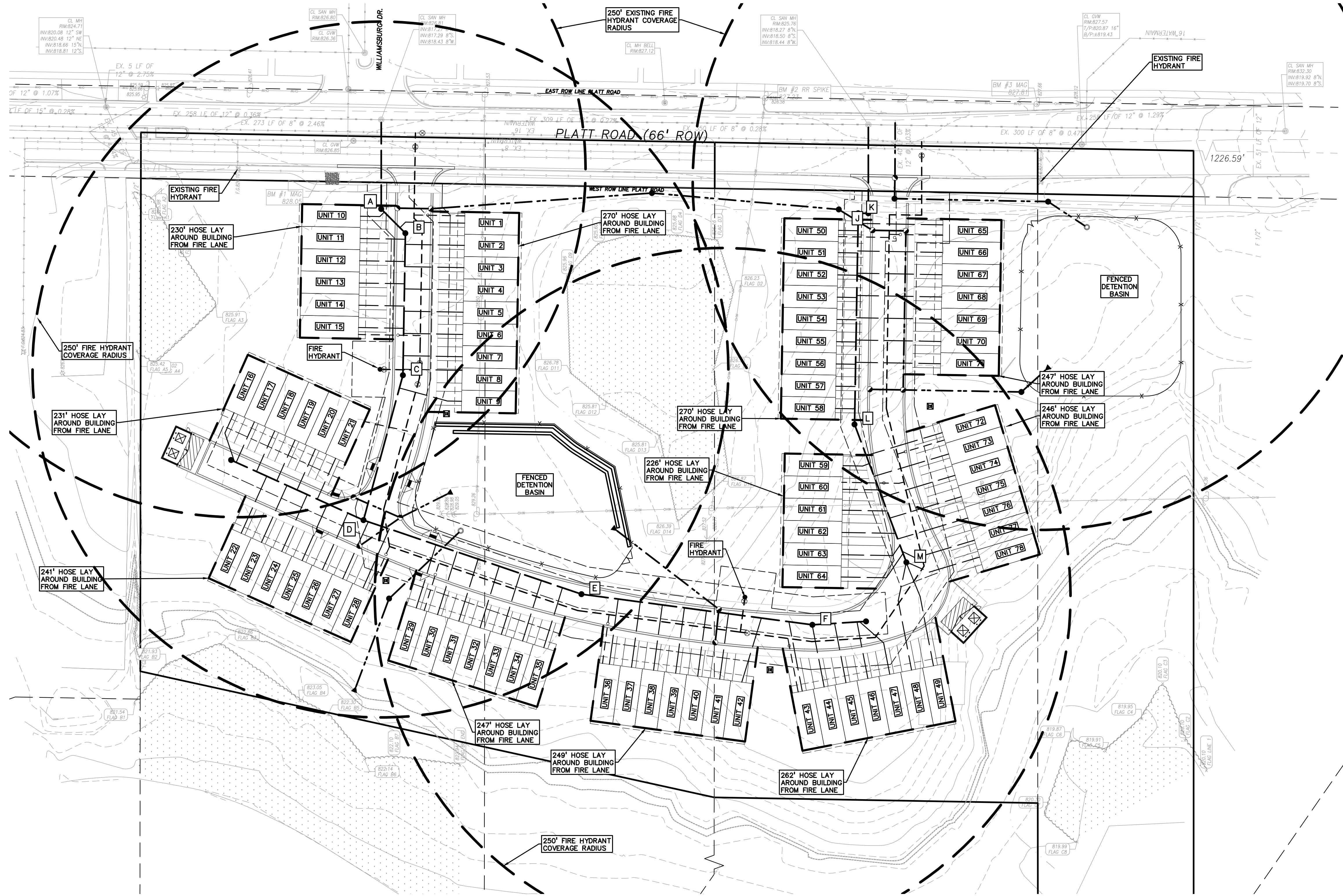
- OH—ELEC—W—O— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG—CATV— ELEC. UNDERGROUND CABLE TV, CATV PEDESTAL
- UG—PHONE— TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG—ELEC—ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS—VALVE & GAS LINE MARKER
- WATER—HYD., GATE VALVE, TAPPING BLEEVE & VALVE
- SEWER—SANITARY SEWER, CLEANOUT & MANHOLE
- STORM—STORM SEWER, CLEANOUT & MANHOLE
- COMBINED—COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST—POST INDICATOR VALVE
- WATER VALVE BOX—WATER VALVE BOX, SERVICE SHUTOFF
- MARB.—MARB. TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED—UNIDENTIFIED STRUCTURE
- SPOT—SPOT ELEVATION
- CONTOUR—CONTOUR LINE
- FENCE—FENCE
- GUARD RAIL—GUARD RAIL
- STREET LIGHT—STREET LIGHT
- SIGN—SIGN

PROPOSED

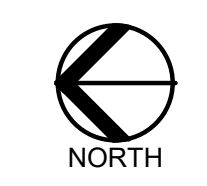
- CONC.—CONCRETE
- ASPH.—ASPHALT
- GRAVEL—GRAVEL SHOULDER
- WETLAND—WETLAND
- 310—310 HEAVY FLOW DUTY ONLY
- 370—370 HEAVY DEEP DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- TELEPHONE
- GAS
- PETROLEUM
- CITY
- FLOOD PLAIN
- OTHER



S:\PROJECTS\2020\2020-0151 PLATT ROAD TOWNHOMES -\CIVIL\SITE PLANS\P-6.1-1 FIRE-2020.dwg



CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
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| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
STORM WATER MANAGEMENT PLAN

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

P-7.0

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | M MEASURED |
| ⊗ NAIL & CAP SET | | C CALCULATED |

EXISTING

- OH-ELEC-W-ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV-UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS-MAN, VALVE & GAS LINE MARKER
- WATER-MAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE

PROPOSED

- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIEN
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL SHOULDER
- WETLAND
- STD. HEAVY FLOW DUTY ONLY
- STD. HEAVY BEEP DUTY DUTY STRENGTH

REFERENCE DRAWINGS

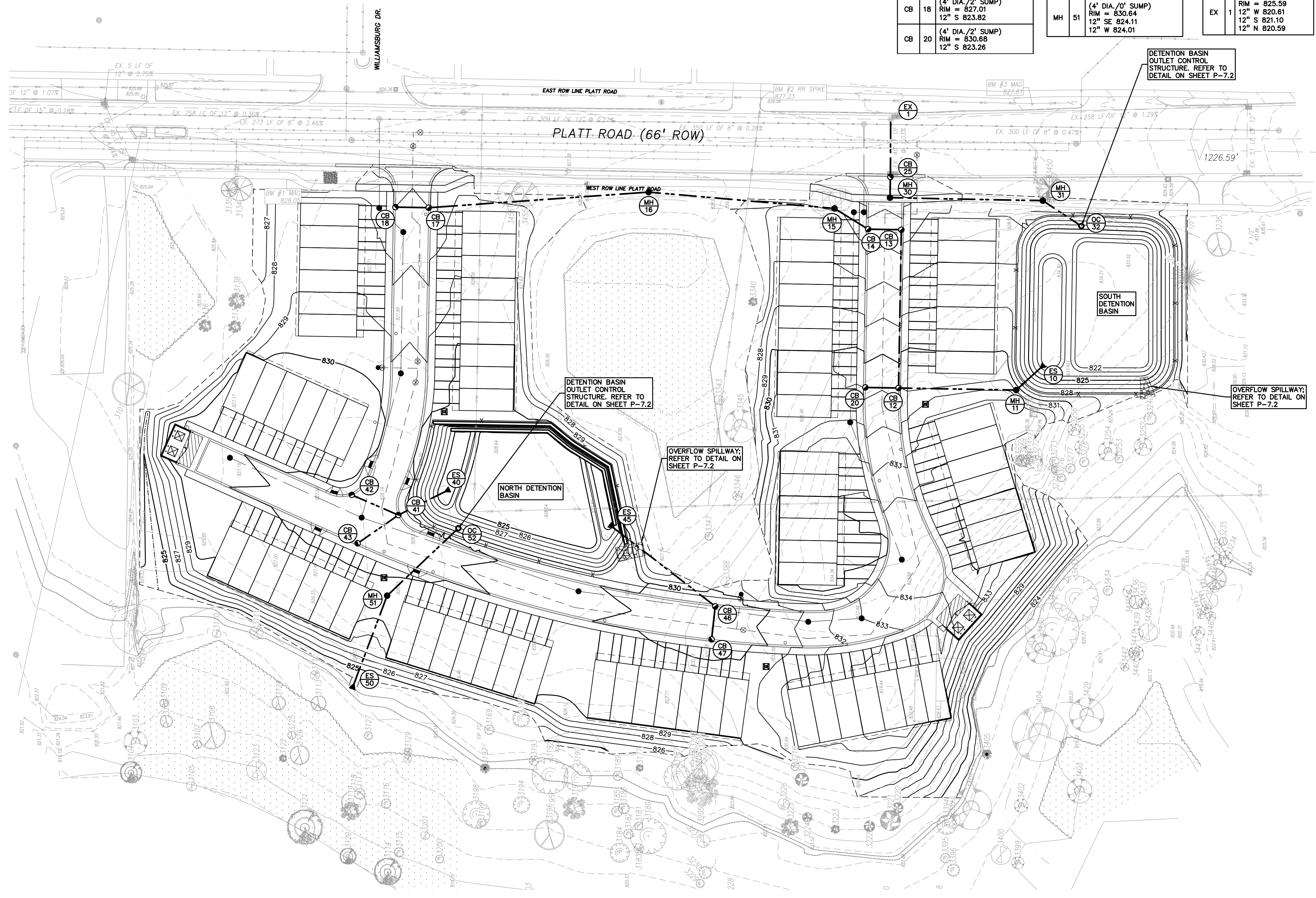
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- PHONE
- CATV
- PETROLEUM
- FLOOD PLAIN
- OTHER

| STORM STRUCTURES | |
|------------------|--|
| MH 11 | (4' DIA./0' SUMP) RIM = 830.86 24" N 821.95 24" SE 821.85 |
| CB 12 | (4' DIA./2' SUMP) RIM = 830.68 12" N 823.16 21" E 822.16 24" S 822.06 |
| CB 13 | (4' DIA./2' SUMP) RIM = 826.32 18" N 822.44 21" W 822.34 |
| CB 14 | (4' DIA./2' SUMP) RIM = 826.32 15" NE 822.58 18" S 822.48 |
| MH 15 | (4' DIA./2' SUMP) RIM = 826.83 15" N 822.75 15" SW 822.65 |
| MH 16 | (4' DIA./0' SUMP) RIM = 828.23 12" N 823.16 15" S 823.08 |
| CB 17 | (4' DIA./2' SUMP) RIM = 827.01 12" N 823.75 12" S 823.65 |
| CB 18 | (4' DIA./2' SUMP) RIM = 827.01 12" S 823.82 |
| CB 20 | (4' DIA./2' SUMP) RIM = 830.68 12" S 823.26 |
| CB 25 | (4' DIA./0' SUMP) RIM = 825.79 12" W 820.89 12" E 820.79 |
| MH 30 | (4' DIA./0' SUMP) RIM = 826.28 12" S 821.05 12" E 820.95 |
| MH 31 | (4' DIA./0' SUMP) RIM = 827.80 12" SW 821.63 12" N 821.53 |
| CB 41 | (4' DIA./2' SUMP) RIM = 829.27 15" NE 825.53 15" NW 825.53 15" SE 825.43 |
| CB 42 | (4' DIA./2' SUMP) RIM = 829.26 15" SW 825.61 |
| CB 43 | (4' DIA./2' SUMP) RIM = 829.13 15" SE 825.61 |
| CB 46 | (4' DIA./2' SUMP) RIM = 829.21 15" W 825.36 18" NE 825.26 |
| CB 47 | (4' DIA./2' SUMP) RIM = 829.21 15" E 825.41 |
| MH 51 | (4' DIA./0' SUMP) RIM = 825.59 12" W 820.61 12" S 821.10 12" N 820.59 |

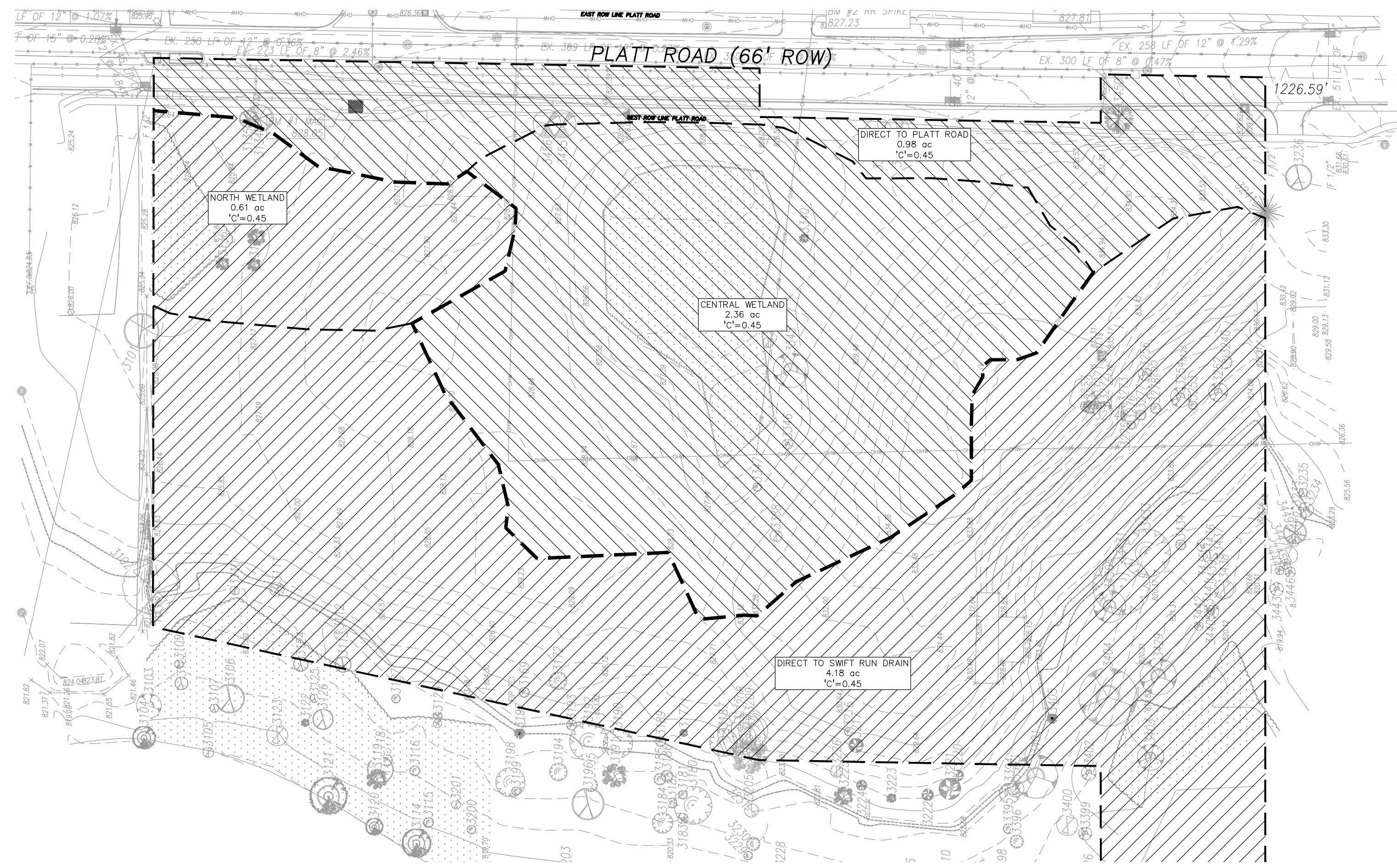
| END SECTIONS | |
|--------------|-----------------------------|
| 10 | END SECTION 24" N 821.81 |
| 40 | END SECTION 15" N 825.33 |
| 45 | END SECTION 18" N 825.08 |
| 50 | END SECTION 12" N 823.70 |

| OVERFLOW CONTROL STRUCTURES | |
|-----------------------------|--|
| STORM STRUCTURES | |
| OC 32 | (3' DIA./0' SUMP) RIM = 825.75 12" NE 821.77 |
| OC 52 | (3' DIA./0' SUMP) RIM = 829.11 12" NW 824.41 |

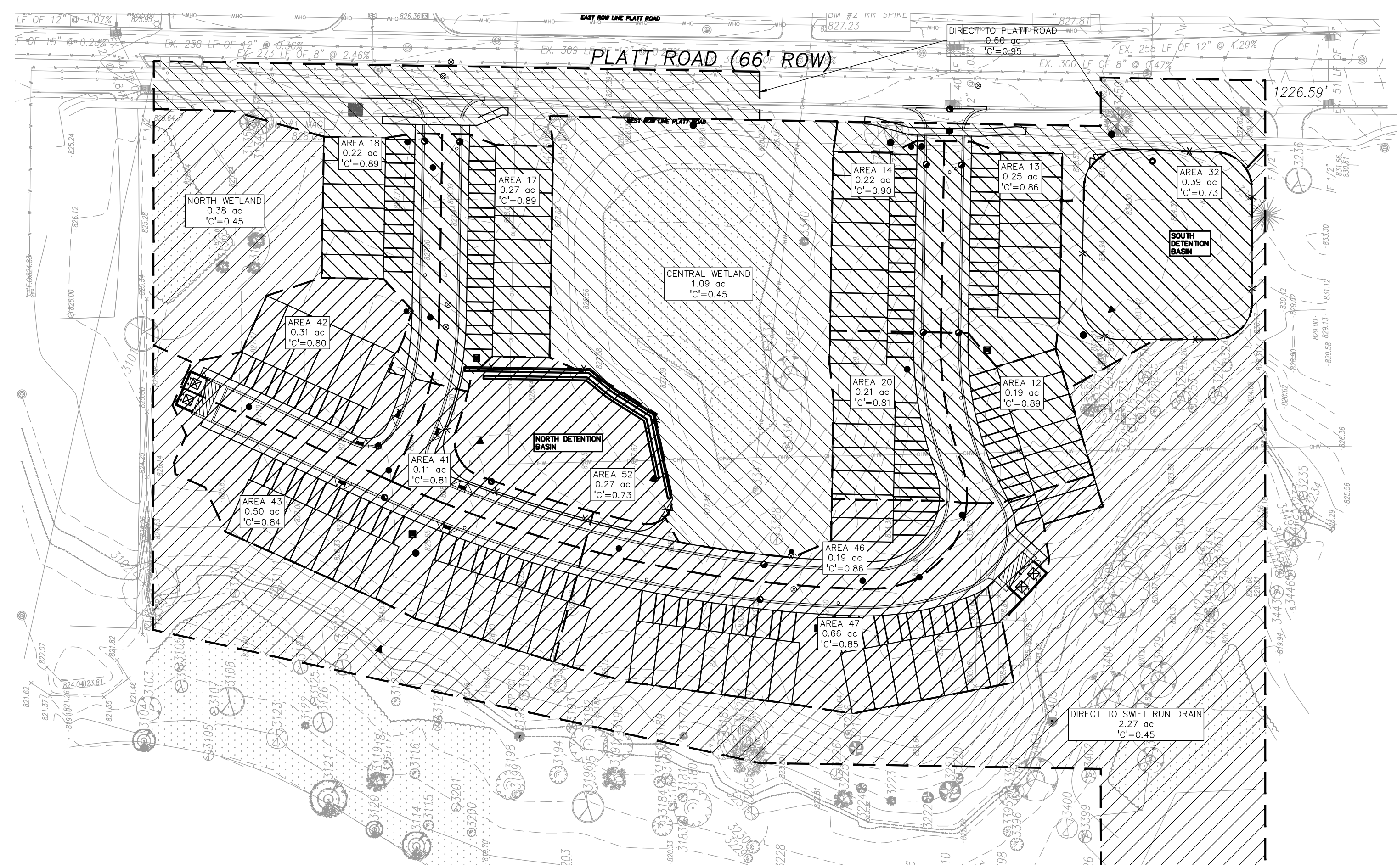
| EXISTING STORM STRUCTURES | |
|---------------------------|--|
| EX 1 | EXISTING STRUCTURE RIM = 825.59 12" W 820.61 12" S 821.10 12" N 820.59 |



S:\PROJECTS\2020-0151 PLATT ROAD TOWNHOMES -CADD\SITE PLANS-P-9 SWP-2010151.dwg



EXISTING DRAINAGE AREAS
SCALE: 1" = 60'



PROPOSED DRAINAGE AREAS
SCALE: 1" = 60'

| DRAINAGE AREA | EXISTING AREA | | PROPOSED AREA | | DIFFERENCE | |
|------------------------------------|----------------|-------------|----------------|-------------|---------------|--------------|
| | SF | ACRES | SF | ACRES | SF | ACRES |
| DRAINAGE TO PLATT ROAD | | | | | | |
| CENTRAL WETLAND | 102,928 | 2.36 | 47,343 | 1.09 | -55,585 | -1.28 |
| DIRECT RUNOFF | 42,763 | 0.98 | 25,987 | 0.60 | -16,776 | -0.39 |
| SOUTH DETENTION BASIN | -- | -- | 76,259 | 1.75 | -- | -- |
| SUB-TOTAL | 145,691 | 3.34 | 149,589 | 3.43 | 3,898 | 0.09 |
| DRAINAGE TO SWIFT RUN DRAIN | | | | | | |
| NORTH WETLAND | 26,674 | 0.61 | 16,515 | 0.38 | -10,159 | -0.23 |
| DIRECT RUNOFF | 182,147 | 4.18 | 98,832 | 2.27 | -83,315 | -1.91 |
| NORTH DETENTION BASIN | -- | -- | 89,560 | 2.06 | -- | -- |
| SUB-TOTAL | 208,821 | 4.79 | 204,907 | 4.70 | -3,914 | -0.09 |
| TOTAL | 354,512 | 8.14 | 354,496 | 8.14 | -16.00 | 0.00 |

| | | |
|---|------|----|
| RUNOFF COEFFICIENT, WATER SURFACES | 1.00 | 98 |
| RUNOFF COEFFICIENT, IMPERVIOUS AREA, TYPE D SOILS | 0.95 | 98 |
| RUNOFF COEFFICIENT, PERVIOUS AREA, TYPE D SOILS | 0.45 | 80 |

| DRAINAGE AREA | IMPERVIOUS | | PERVIOUS | | WATER | | TOTAL | | RUNOFF COEFFICIENT | CURVE NUMBER |
|------------------------------|----------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|--------------------|--------------|
| | SF | ACRES | SF | ACRES | SF | ACRES | SF | ACRES | | |
| SOUTH DETENTION BASIN | | | | | | | | | | |
| 12 | 7,325 | 0.17 | 960 | 0.02 | 0 | 0 | 8,285 | 0.19 | 0.89 | 96 |
| 13 | 8,514 | 0.20 | 2,478 | 0.06 | 0 | 0 | 10,992 | 0.25 | 0.84 | 94 |
| 14 | 8,579 | 0.20 | 851 | 0.02 | 0 | 0 | 9,430 | 0.22 | 0.90 | 96 |
| 17 | 10,420 | 0.24 | 1,299 | 0.03 | 0 | 0 | 11,719 | 0.27 | 0.89 | 96 |
| 18 | 8,335 | 0.19 | 1,223 | 0.03 | 0 | 0 | 9,558 | 0.22 | 0.89 | 96 |
| 20 | 7,145 | 0.16 | 2,159 | 0.05 | 0 | 0 | 9,304 | 0.21 | 0.83 | 94 |
| 32 | 0 | 0.00 | 7,531 | 0.17 | 7,531 | 0.17 | 16,971 | 0.35 | 0.73 | 89 |
| SUB-TOTAL | 50,318 | 1.16 | 16,501 | 0.38 | 7,531 | 0.17 | 76,259 | 1.71 | 0.84 | 94 |
| NORTH DETENTION BASIN | | | | | | | | | | |
| 41 | 3,613 | 0.08 | 1,338 | 0.03 | 0 | 0 | 4,951 | 0.11 | 0.81 | 93 |
| 42 | 9,157 | 0.21 | 4,454 | 0.10 | 0 | 0 | 13,611 | 0.31 | 0.79 | 92 |
| 43 | 16,386 | 0.38 | 5,420 | 0.12 | 0 | 0 | 21,806 | 0.50 | 0.83 | 94 |
| 46 | 6,838 | 0.16 | 1,633 | 0.04 | 0 | 0 | 8,471 | 0.19 | 0.85 | 95 |
| 47 | 22,249 | 0.51 | 6,573 | 0.15 | 0 | 0 | 28,822 | 0.66 | 0.84 | 94 |
| 52 | 0 | 0.00 | 5,867 | 0.13 | 5,867 | 0.13 | 11,903 | 0.27 | 0.73 | 89 |
| SUB-TOTAL | 58,243 | 1.34 | 25,285 | 0.58 | 5,867 | 0.13 | 89,564 | 2.05 | 0.81 | 93 |
| TOTAL | 108,561 | 2.49 | 41,786 | 0.96 | 13,398 | 0.31 | 165,823 | 3.76 | 0.83 | 93 |

PROPOSED & EXISTING RUNOFF TO SITE OUTLET

EXISTING RUNOFF

DRAINAGE TO PLATT ROAD (UNRESTRICTED)

- A = 2.36 + 0.98 = 3.34 AC
- C = 0.45
- TC = 20 MIN
- Q(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hr
- Q(100-YEAR) = CIA = 0.45 X 6.11 X 3.34 = 9.18 CFS

DRAINAGE TO SWIFT RUN DRAIN (UNRESTRICTED)

- A = 0.61 + 4.18 = 4.79 AC
- C = 0.45
- TC = 20 MIN
- Q(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hr
- Q(100-YEAR) = CIA = 0.45 X 6.11 X 4.79 = 13.17 CFS

PROPOSED RUNOFF (OFF-SITE, ON SITE, AND BASIN)

DRAINAGE TO PLATT ROAD, (RESTRICTED AND UNRESTRICTED)

- A = 1.10 + 0.59 = 1.69 AC
- C = 0.45
- TC = 20 MIN
- Q(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hr
- Q(100-YEAR) = CIA = 0.45 X 6.11 X 1.69 = 4.65 CFS
- Q (SOUTH BASIN) = 0.22 CFS (FROM CALCS ON SHEET P-7.4)
- PROPOSED Q (TOTAL) = 4.65 + 0.22 = 4.87 CFS
- 4.87 CFS (PROPOSED) < 9.18 CFS (EXISTING)

DRAINAGE TO SWIFT RUN DRAIN, (RESTRICTED AND UNRESTRICTED)

- A = 0.36 + 2.27 = 2.63 AC
- C = 0.45
- TC = 20 MIN
- Q(100-YEAR) = 275/(T+25) = 275/(20+25) = 6.11 in/hr
- Q(100-YEAR) = CIA = 0.45 X 6.11 X 2.63 = 7.23 CFS
- Q (NORTH BASIN) = 0.30 CFS (FROM CALCS ON SHEET P-7.3)
- PROPOSED Q (TOTAL) = 7.23 + 0.30 = 7.53 CFS
- 7.53 CFS (PROPOSED) < 13.17 CFS (EXISTING)

STORM WATER NARRATIVE

THE EXISTING PARCEL CURRENTLY DRAINS, UN-DETAINED, VIA SHEET FLOW TO THE PLATT ROAD RIGHT-OF-WAY AND THE SWIFT RUN DRAIN.

INFILTRATION TESTING WAS PERFORMED ON THE SUBJECT PARCEL IN ACCORDANCE WITH THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER RULES AND GUIDELINES. ONLY ONE LOCATION PROVED TO BE SUITABLE FOR INFILTRATION; HOWEVER, THE ELEVATION OF THE SOILS IN THIS LOCATION ARE SEVERAL FEET ABOVE THE BOTTOM OF THE SOUTH DETENTION BASIN. CONSEQUENTLY, INFILTRATION WILL NOT BE INCLUDED FOR EITHER BASIN AND THE SUBSEQUENT PENALTY FOR NOT PROVIDING INFILTRATION WILL BE USED.

A NEW ON-SITE ENCLOSED STORM SEWER SYSTEM DESIGNED PER THE WASHTENAW COUNTY WATER RESOURCES COMMISSIONER STANDARDS WILL ALSO BE INCLUDED.

THE DETENTION BASINS WILL CAPTURE STORM WATER RUNOFF FROM ON-SITE TRIBUTARY DRAINAGE AREAS. THE SOUTH DETENTION BASIN WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM IN THE PLATT ROAD RIGHT-OF-WAY AND THE NORTH DETENTION BASIN WILL DISCHARGE TO THE SWIFT RUN DRAIN. PLEASE REFER TO THE CALCULATIONS PROVIDED ON SHEETS P-7.3 AND P-7.4 FOR RELEASE RATES.

SOME ON-SITE AREAS AROUND THE PERIMETER OF THE PARCEL CURRENTLY DISCHARGE OFF-SITE, UN-DETAINED. SOME OF THESE AREAS CONTAIN EXISTING WETLANDS, TREES AND VEGETATION THAT ARE TO BE LEFT UNDISTURBED AND ARE LOCATED OUTSIDE OF THE PROPOSED GRADING LIMITS.

LEGEND

| | | |
|------------------|------------------|--------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC CORNER FOUND |
| ⊙ IRON SET | ⊗ MONUMENT FOUND | ⊙ R RECORDED |
| ⊙ NAIL FOUND | ⊗ MONUMENT SET | ⊙ M MEASURED |
| ⊙ NAIL & CAP SET | | ⊙ C CALCULATED |

EXISTING

- OH-ELEC-W-ELEC. PHONE OR CABLE TV, OIL LINE, POLE & GUY WIRE
- UG-CATV-UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-TELEPHONE U.G. CABLE, MANHOLE, METER & MANHOLE
- UG-ELEC-ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE
- GAS VALVE & GAS LINE MARKER
- WATER MAIN, HYD. GATE VALVE, TAPPING BLEED & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARDRAIL
- STREET LIGHT
- SIEN

PROPOSED

- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL SHOULDER
- WETLAND
- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY FLOW DUTY STRENGTH

REFERENCE DRAWINGS

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- COMBINED SEWER
- ELECTRIC
- PETROLEUM
- CATV
- FLOOD PLAIN
- OTHER

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STATE OF MICHIGAN
JOSEPH B. WYWROT
No. 45874
REGISTERED PROFESSIONAL ENGINEER

0 30 60 120
SCALE: 1" = 60'

811 Know what's below. Call before you dig.

CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD.
ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE CONCRETE DRIVE ENTRANCE
ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD
ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:
TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

CLIENT

TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE

PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

REVISIONS

| OWNER REVIEW | 9/18/2020 |
|------------------------|-----------|
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
STORM WATER MANAGEMENT DRAINAGE AREAS

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

S:\PROJECTS\2020\0151-0151 PLATT ROAD TOWNHOMES -ACTING SITE PLANS (P-9) SWP-2010151.dwg

STORM SEWER SYSTEM DESIGN

$I = \frac{B}{(T+D)^E}$
 $C = \text{varies}$
 $T = 20$ (min.)
 $B = 175.0$
 $D = 25.0$
 $E = 1$
 Pipe "n" Value = 0.013

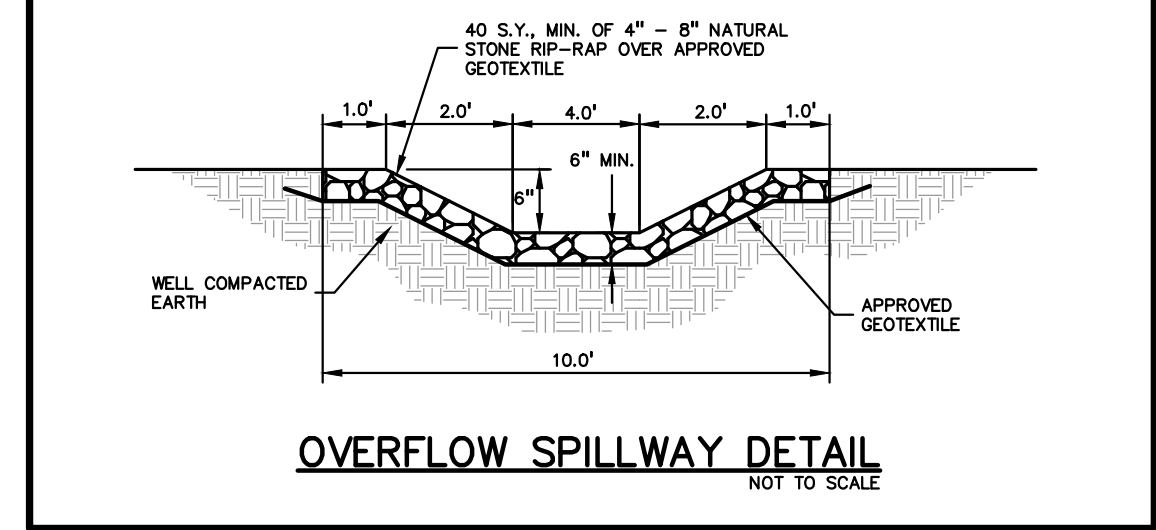
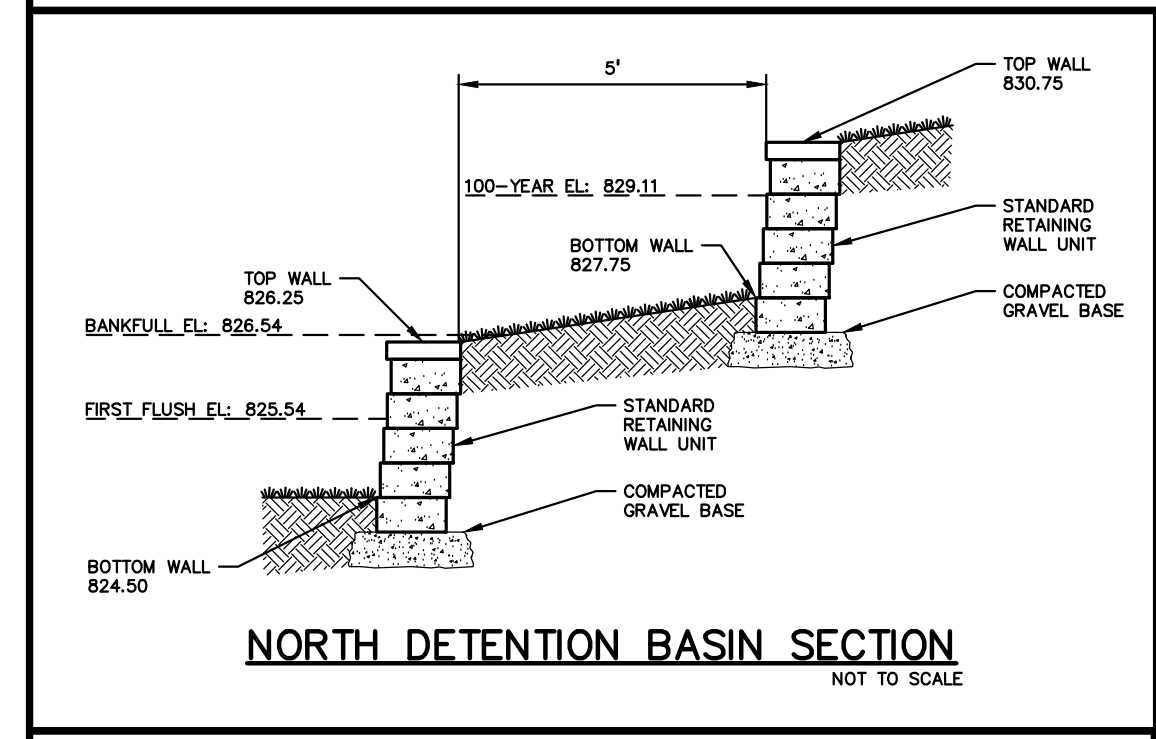
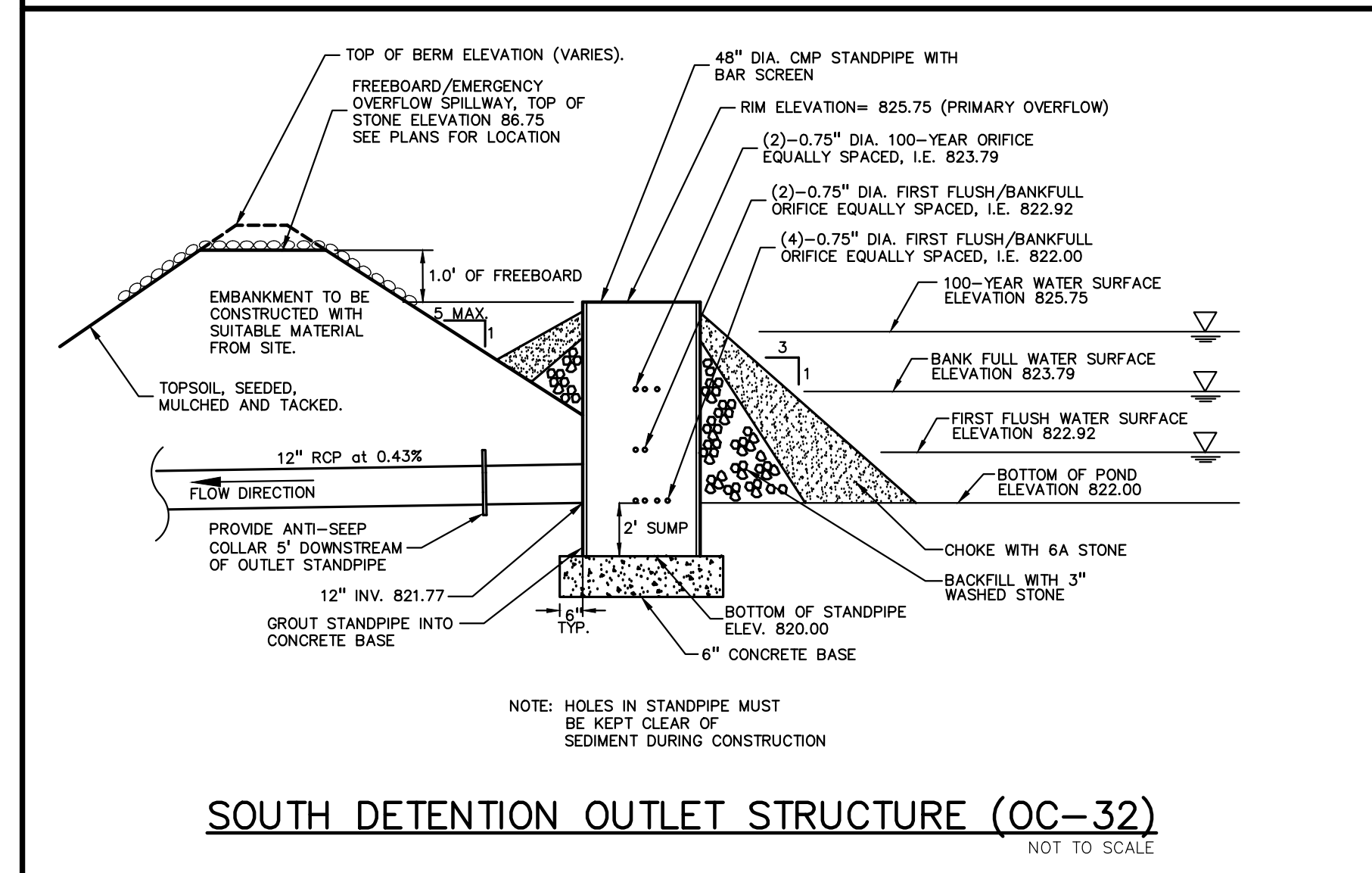
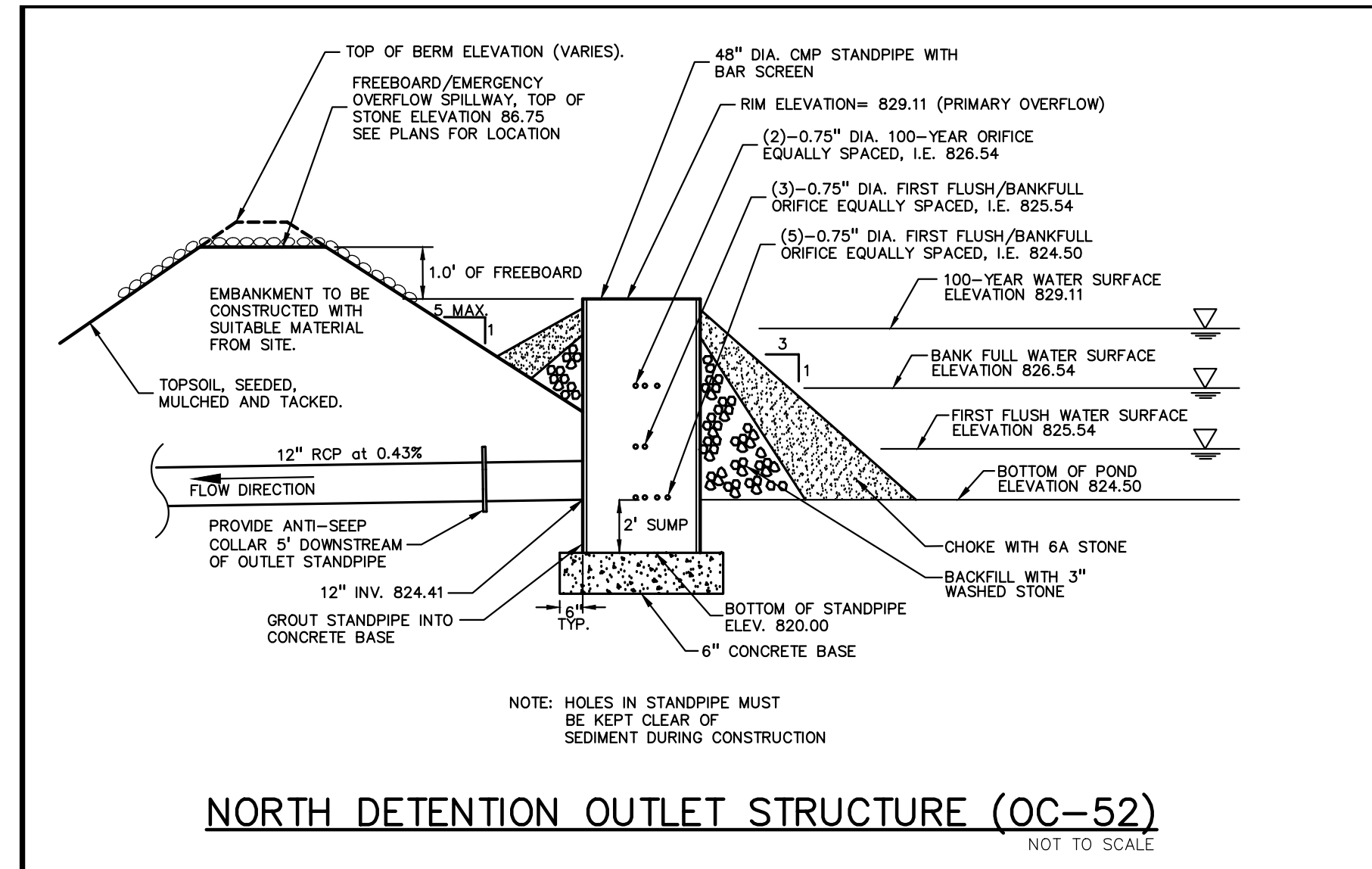
| FROM STR | TO STR | AREA (A) (Acres) | COEF. C | A x C | TOTAL AREA (AxC) (Acres) | TIME t (min.) | INT. I (in/hr) | FLOW Q (cfs) | PIPE CAP. (cfs) | PIPE DIA. (in.) | PIPE LENGTH (ft.) | PIPE SLOPE (%) | MIN HG PER "Q" | VEL. FULL (ft./sec) | TIME FLOW (min.) | H.G.L. ELEV. | | RIM ELEV. | | INVERT ELEV. | | PIPE COVER | | HGL COVER | | |
|----------|--------|------------------|---------|-------|--------------------------|---------------|----------------|--------------|-----------------|-----------------|-------------------|----------------|----------------|---------------------|------------------|--------------|-------------|-----------|-------------|--------------|-------------|------------|-------------|-----------|-------------|------|
| | | | | | | | | | | | | | | | | UP STREAM | DOWN STREAM | UP STREAM | DOWN STREAM | UP STREAM | DOWN STREAM | UP STREAM | DOWN STREAM | UP STREAM | DOWN STREAM | |
| 18 | 17 | 0.23 | 0.89 | 0.20 | 0.20 | 20.00 | 3.89 | 0.80 | 1.98 | 12 | 24 | 0.31 | 0.05% | 2.5 | 0.2 | 824.63 | 824.55 | 827.01 | 827.01 | 823.83 | 823.75 | 2.01 | 2.09 | 2.38 | 2.45 | |
| 17 | 16 | 0.27 | 0.88 | 0.24 | 0.44 | 0.50 | 20.20 | 3.87 | 1.72 | 1.98 | 12 | 159 | 0.31 | 0.23% | 2.5 | 1.1 | 824.45 | 824.06 | 827.01 | 828.23 | 823.65 | 823.16 | 2.19 | 3.91 | 2.55 | 4.18 |
| 16 | 15 | 0.00 | 0.00 | 0.00 | 0.44 | 0.50 | 21.30 | 3.78 | 1.72 | 3.10 | 15 | 135 | 0.23 | 0.07% | 2.5 | 0.9 | 824.06 | 823.85 | 828.23 | 826.51 | 823.06 | 822.75 | 3.74 | 2.33 | 4.18 | 2.66 |
| 15 | 14 | 0.00 | 0.00 | 0.00 | 0.44 | 0.50 | 22.20 | 3.71 | 1.72 | 3.10 | 15 | 28 | 0.23 | 0.07% | 2.5 | 0.2 | 823.85 | 823.83 | 826.51 | 826.32 | 822.85 | 822.58 | 2.43 | 2.30 | 2.66 | 2.49 |
| 14 | 13 | 0.21 | 0.91 | 0.19 | 0.63 | 0.71 | 22.40 | 3.69 | 2.34 | 4.46 | 18 | 24 | 0.18 | 0.05% | 2.5 | 0.2 | 823.83 | 823.82 | 826.32 | 826.32 | 822.48 | 822.44 | 2.13 | 2.17 | 2.49 | 2.50 |
| 13 | 12 | 0.28 | 0.86 | 0.24 | 0.88 | 0.99 | 22.60 | 3.68 | 3.22 | 6.34 | 21 | 114 | 0.16 | 0.04% | 2.6 | 0.7 | 823.82 | 823.77 | 826.32 | 830.68 | 822.34 | 822.16 | 2.00 | 6.55 | 2.50 | 6.91 |
| 12 | 11 | 0.20 | 0.91 | 0.18 | 1.23 | 1.40 | 23.30 | 3.62 | 4.46 | 8.16 | 24 | 85 | 0.13 | 0.04% | 2.6 | 0.5 | 823.77 | 823.74 | 830.68 | 830.66 | 822.06 | 821.95 | 6.38 | 6.66 | 6.91 | 7.11 |
| 11 | 10 | 0.00 | 0.00 | 0.00 | 1.23 | 1.40 | 23.80 | 3.59 | 4.46 | 8.16 | 24 | 27 | 0.13 | 0.04% | 2.6 | 0.2 | 823.74 | 823.73 | 830.66 | 823.79 | 821.85 | 821.81 | 6.76 | — | 7.11 | — |
| 20 | 12 | 0.21 | 0.82 | 0.17 | 0.17 | 0.21 | 20.00 | 3.89 | 0.67 | 2.34 | 12 | 24 | 0.43 | 0.04% | 3.0 | 0.1 | 824.06 | 823.96 | 830.68 | 830.68 | 823.26 | 823.16 | 6.26 | 6.36 | 6.62 | 6.73 |
| 32 | 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 | 3.89 | 0.00 | 2.34 | 12 | 33 | 0.43 | 0.00% | 3.0 | 0.2 | 822.57 | 822.43 | 825.75 | 827.80 | 821.77 | 821.63 | — | 5.00 | — | 5.37 |
| 31 | 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.20 | 3.87 | 0.00 | 2.34 | 12 | 110 | 0.43 | 0.00% | 3.0 | 0.6 | 822.53 | 821.85 | 827.80 | 826.28 | 821.53 | 821.05 | 5.10 | 4.06 | 5.47 | 4.43 |
| 30 | 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.80 | 3.82 | 0.00 | 2.34 | 12 | 15 | 0.43 | 0.00% | 3.0 | 0.1 | 821.75 | 821.69 | 826.28 | 825.79 | 820.95 | 820.89 | 4.16 | 3.74 | 4.53 | 4.10 |
| 25 | 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.90 | 3.81 | 0.00 | 2.34 | 12 | 41 | 0.43 | 0.00% | 3.0 | 0.2 | 821.59 | 821.41 | 825.79 | 825.59 | 820.79 | 820.61 | 3.84 | — | 4.20 | 4.18 |
| 42 | 41 | 0.32 | 0.79 | 0.25 | 0.25 | 0.32 | 20.00 | 3.89 | 0.98 | 3.10 | 15 | 37 | 0.23 | 0.02% | 2.5 | 0.2 | 826.64 | 826.63 | 829.26 | 829.27 | 825.61 | 825.53 | 2.21 | 2.30 | 2.63 | 2.64 |
| 41 | 40 | 0.11 | 0.84 | 0.09 | 0.77 | 0.94 | 20.20 | 3.87 | 2.99 | 3.10 | 15 | 41 | 0.23 | 0.21% | 2.5 | 0.3 | 826.63 | 826.54 | 829.27 | 825.75 | 825.43 | 825.33 | 2.40 | — | 2.64 | — |
| 43 | 41 | 0.51 | 0.84 | 0.43 | 0.43 | 0.51 | 20.00 | 3.89 | 1.66 | 3.10 | 15 | 36 | 0.23 | 0.07% | 2.5 | 0.2 | 826.65 | 826.63 | 829.13 | 829.27 | 825.61 | 825.53 | 2.09 | 2.30 | 2.48 | 2.64 |
| 47 | 46 | 0.66 | 0.85 | 0.56 | 0.56 | 0.66 | 20.00 | 3.89 | 2.17 | 3.10 | 15 | 24 | 0.23 | 0.11% | 2.5 | 0.2 | 826.64 | 826.61 | 829.21 | 829.21 | 825.41 | 825.36 | 2.38 | 2.42 | 2.57 | 2.60 |
| 46 | 45 | 0.20 | 0.87 | 0.17 | 0.73 | 0.86 | 20.20 | 3.87 | 2.84 | 4.46 | 18 | 96 | 0.18 | 0.07% | 2.5 | 0.6 | 826.61 | 826.54 | 829.21 | 825.94 | 825.26 | 825.08 | 2.24 | — | 2.60 | — |
| 52 | 51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 | 3.89 | 0.00 | 2.34 | 12 | 71 | 0.43 | 0.00% | 3.0 | 0.4 | 825.21 | 824.91 | 829.11 | 830.08 | 824.41 | 824.11 | — | 4.80 | — | 5.17 |
| 51 | 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.40 | 3.85 | 0.00 | 2.34 | 12 | 72 | 0.43 | 0.00% | 3.0 | 0.4 | 824.81 | 824.50 | 830.08 | 824.95 | 824.01 | 823.70 | 4.90 | — | 5.27 | — |

| TASKS | MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION | | | | | | | | SCHEDULE |
|--|--|-------------------|----------------------------|--------------------|---------------------------|---------|-----------------|-----------------------|-------------------------------|
| | STORM SEWER SYSTEM | CATCH BASIN SUMPS | CATCH BASIN INLET CASTINGS | DITCHES AND SWALES | OUTFLOW CONTROL STRUCTURE | RIP-RAP | SEDIMENT BASINS | STORM DETENTION AREAS | |
| INSPECT FOR SEDIMENT ACCUMULATION | X | X | | X | X | | X | X | WEEKLY |
| REMOVAL OF SEDIMENT ACCUMULATION | X | X | | X | X | | X | X | AS NEEDED & PRIOR TO TURNOVER |
| INSPECT FOR FLOATABLES AND DEBRIS | | | X | X | X | | X | X | QUARTERLY |
| CLEANING OF FLOATABLES AND DEBRIS | | | X | X | X | | X | X | QUARTERLY & AT TURNOVER |
| INSPECTION FOR EROSION | | | | X | X | | X | X | WEEKLY |
| RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES | | | | X | X | | X | X | AS NEEDED & PRIOR TO TURNOVER |
| REPLACEMENT OF STONE | | | | | X | X | | X | AS NEEDED & PRIOR TO TURNOVER |
| MOWING | | | | X | X | | X | X | 0-2 TIMES PER YEAR |
| INSPECT STORM WATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS | | | X | X | X | X | X | X | ANNUALLY AND AT TURNOVER |
| MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION | X | X | X | X | X | X | X | X | AS NEEDED |

* AS NEEDED MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM DEPTH OF ONE FOOT

| TASKS | PERMANENT MAINTENANCE TASKS, SCHEDULE AND BUDGET | | | | | | ESTIMATED ANNUAL BUDGET | | | SESC TASKS | |
|--|--|--------------------|---------------------------|---------|-----------------|-----------------------|---------------------------|----------|----------|------------|----------|
| | CATCH BASIN INLET CASTINGS | DITCHES AND SWALES | OUTFLOW CONTROL STRUCTURE | RIP-RAP | SEDIMENT BASINS | STORM DETENTION AREAS | SCHEDULE | 1ST YEAR | 2ND YEAR | | 3RD YEAR |
| INSPECT FOR SEDIMENT ACCUMULATION | | X | X | | X | X | ANNUALLY | \$100 | \$100 | \$100 | X |
| REMOVAL OF SEDIMENT ACCUMULATION | | X | X | | X | X | EVERY 2 YEARS AS NEEDED | \$300 | \$100 | \$0 | X |
| INSPECT FOR FLOATABLES AND DEBRIS | X | X | X | | X | X | ANNUALLY | \$75 | \$75 | \$75 | |
| CLEANING OF FLOATABLES AND DEBRIS | X | X | X | | X | X | ANNUALLY | \$150 | \$50 | \$0 | |
| INSPECTION FOR EROSION | | X | X | | X | X | ANNUALLY | \$125 | \$100 | \$100 | X |
| RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES | | X | X | | X | X | AS NEEDED | \$250 | \$100 | \$100 | X |
| REPLACEMENT OF STONE | | | X | X | | X | EVERY 3-5 YEARS AS NEEDED | \$150 | \$0 | \$250 | X |
| MOWING | | X | X | | X | X | 0-2 TIMES PER YEAR | \$2,500 | \$1,750 | \$1,750 | |
| INSPECT STORM WATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS | X | X | X | X | X | X | ANNUALLY | \$75 | \$75 | \$75 | |
| INSPECT INFILTRATION BASIN FOLLOWING STORMS OF 1-INCH OR MORE | | | | | X | X | AS NEEDED | \$75 | \$75 | \$75 | |
| MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION | X | X | X | X | X | X | AS NEEDED | \$300 | \$300 | \$300 | |
| KEEP RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES | | | | | | | ANNUALLY | \$0 | \$0 | \$0 | |
| KEEP RECORDS OF ALL COSTS FOR INSPECTIONS, MAINTENANCE, AND REPAIRS | | | | | | | ANNUALLY | \$0 | \$0 | \$0 | |
| TOTAL BUDGET | | | | | | | | \$4,100 | \$2,725 | \$2,825 | |
| SESC BUDGET | | | | | | | | 925 | 400 | 550 | |

NOTE: LONG-TERM STORM WATER MAINTENANCE WILL BE PERFORMED BY THE PROPERTY OWNER, TROWBRIDGE COMPANIES.



PEA GROUP
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Professional Engineer
 JOSEPH B. WYVROT
 No. 45874
 State of Michigan

NORTH

0 20 40 80
 SCALE: 1" = 40'

811 Know what's below. Call before you dig.

CAUTION!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPAWCWRC REVIEW | 1/13/2022 |
| SPAWCWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPAWCWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

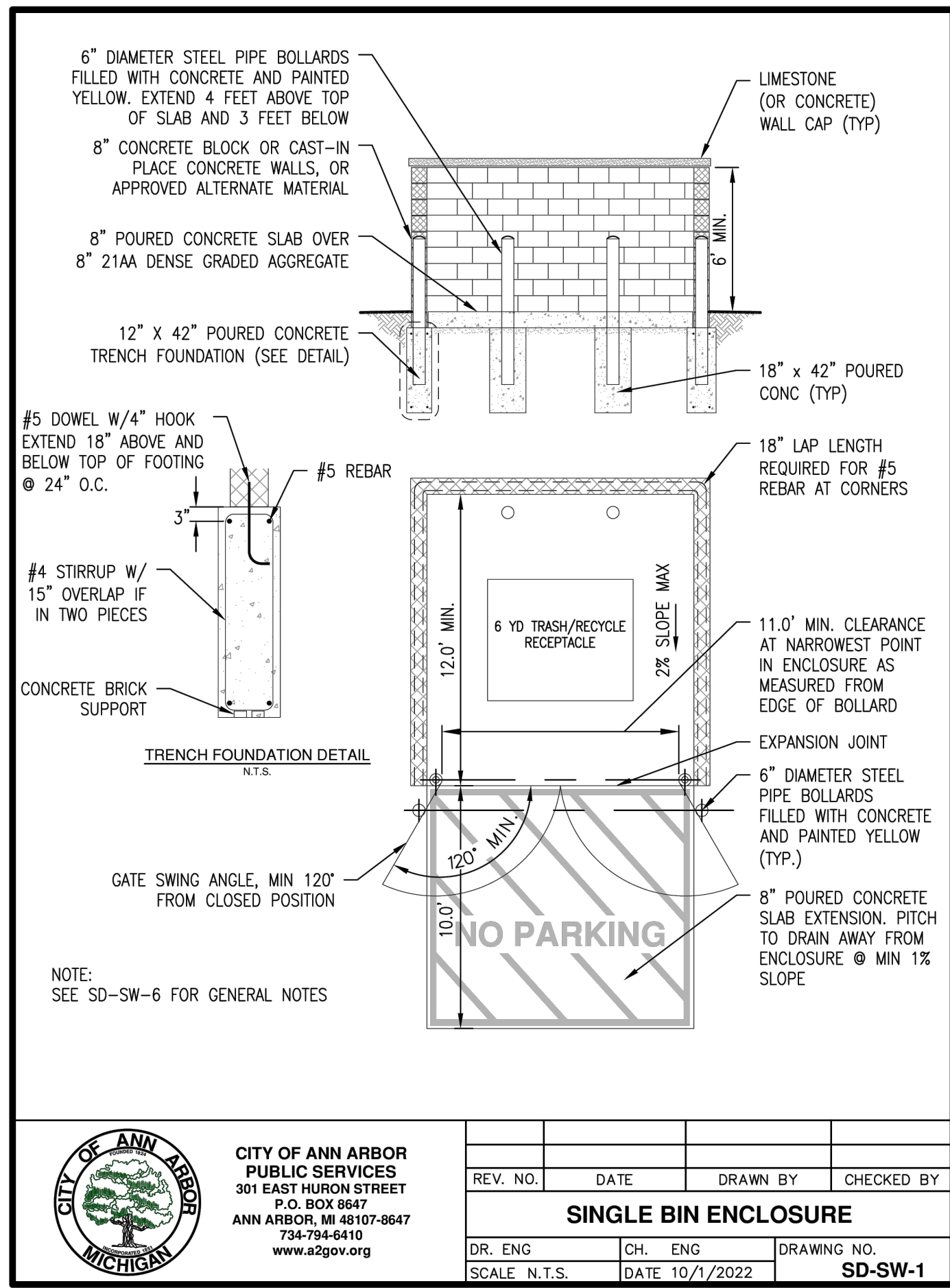
ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
STORM WATER MANAGEMENT CALCULATIONS

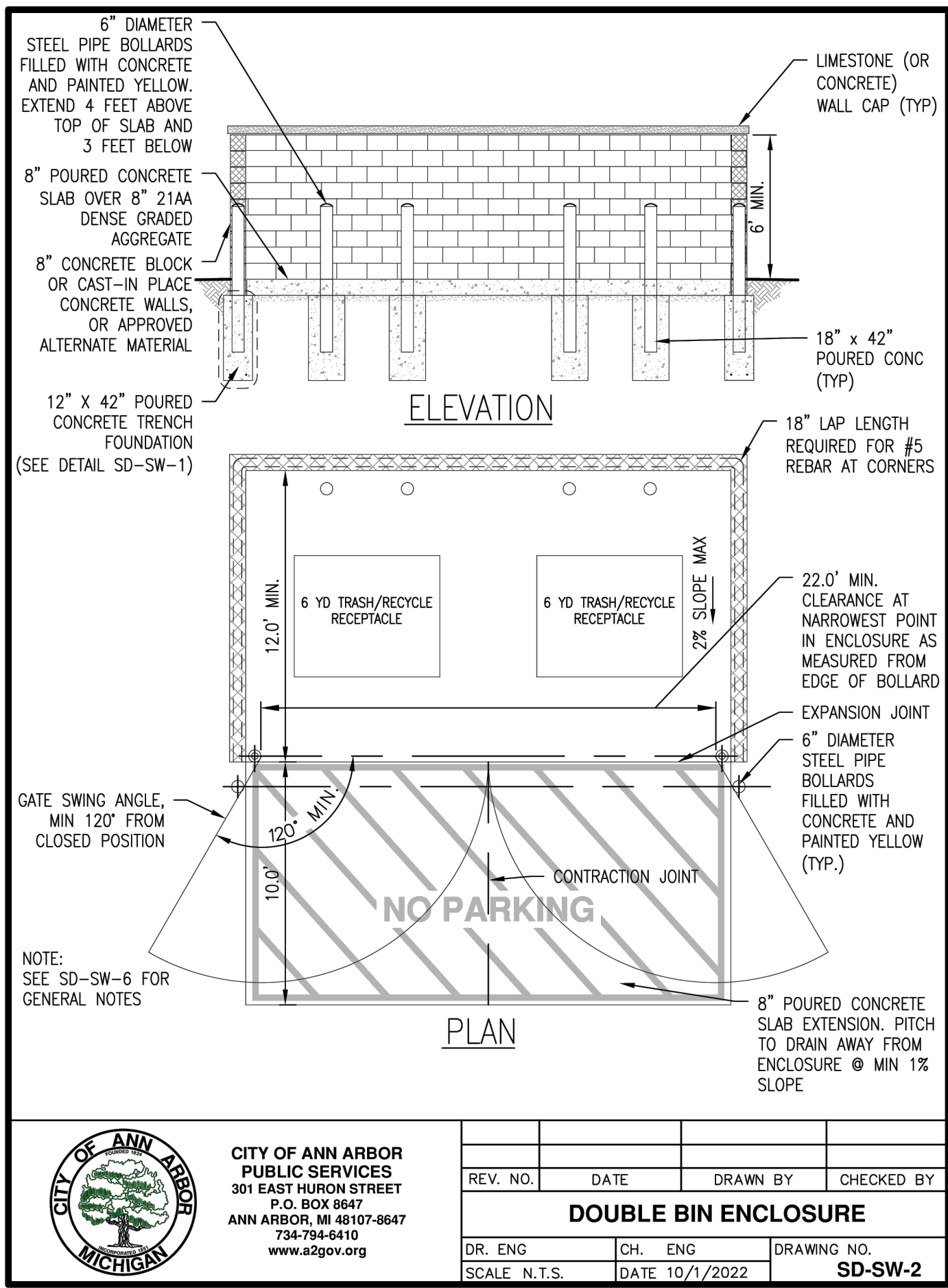
| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

P-7.2

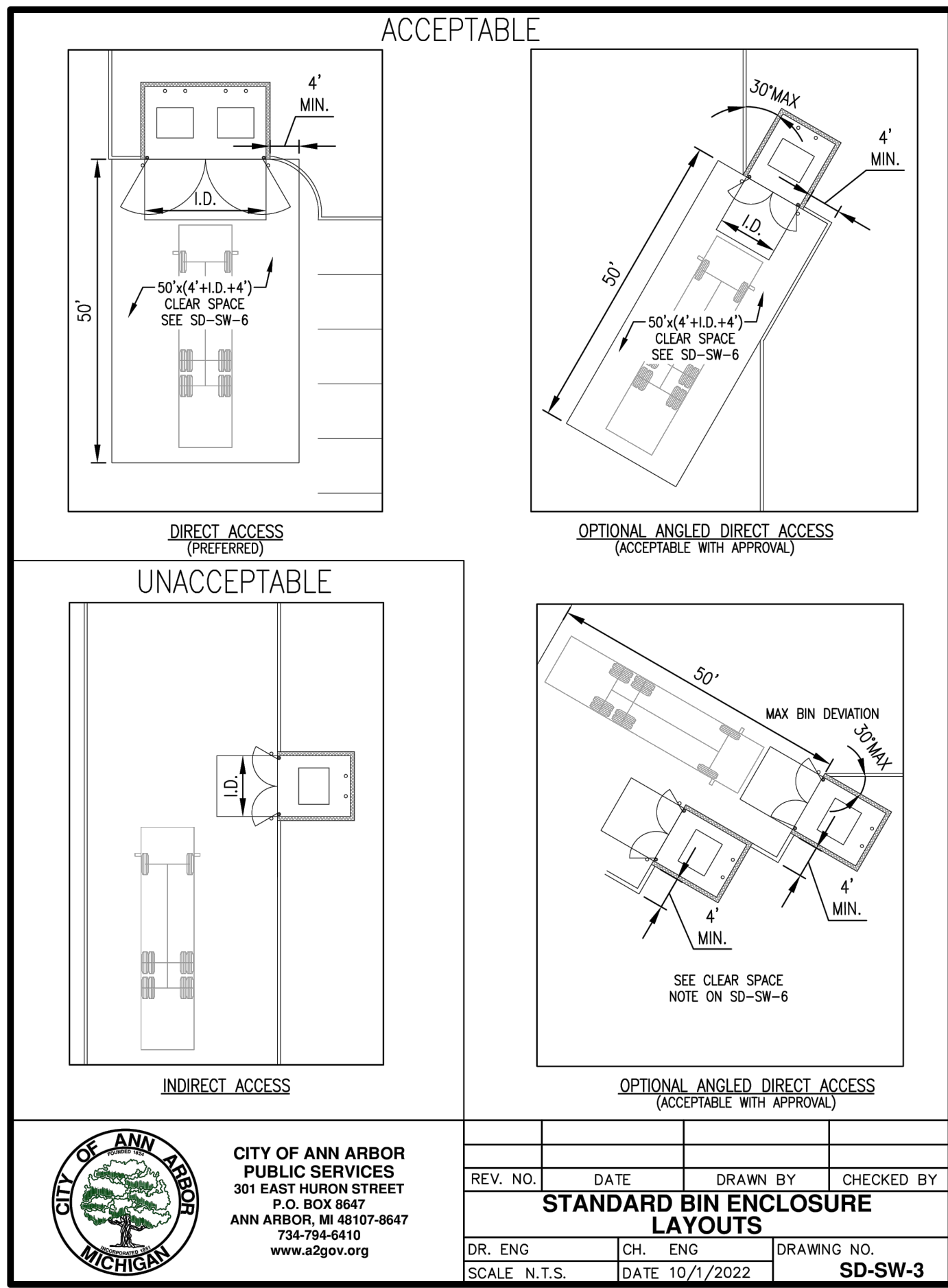
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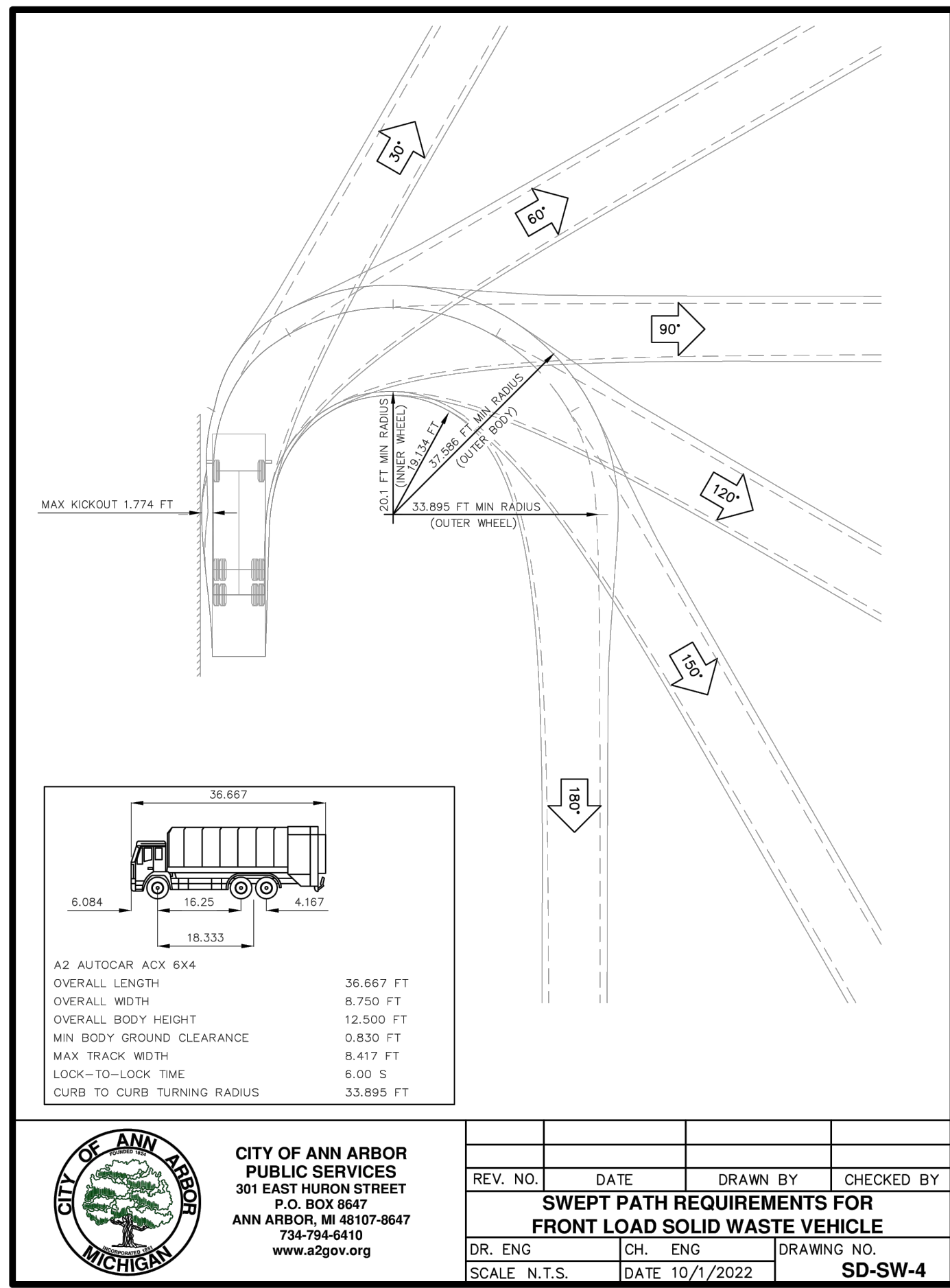
| | | | |
|-----------------------------|----------------|----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| SINGLE BIN ENCLOSURE | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-1 | |



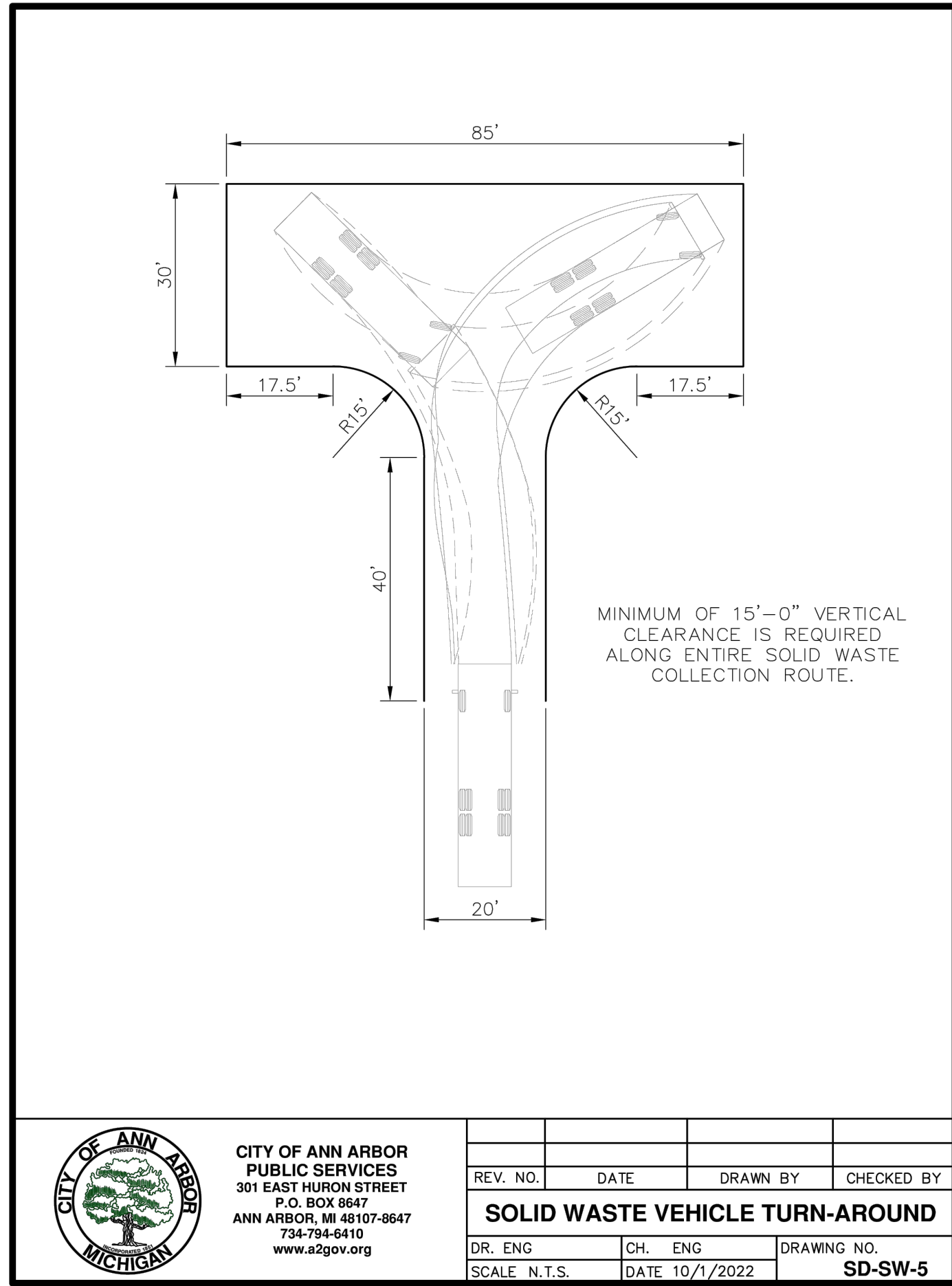
| | | | |
|-----------------------------|----------------|----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| DOUBLE BIN ENCLOSURE | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-2 | |



| | | | |
|---------------------------------------|----------------|----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| STANDARD BIN ENCLOSURE LAYOUTS | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-3 | |



| | | | |
|---|----------------|----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| SWEEP PATH REQUIREMENTS FOR FRONT LOAD SOLID WASTE VEHICLE | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-4 | |



| | | | |
|--|----------------|----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| SOLID WASTE VEHICLE TURN-AROUND | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-5 | |

- MAINTAIN A CLEAR SPACE DIRECTLY IN FRONT OF THE SOLID WASTE ENCLOSURE. THE CLEAR SPACE SHALL BE A MINIMUM OF FIFTY (50) FEET LONG BY THE WIDTH OF THE INSIDE DIMENSION (I.D.) OF THE ENCLOSURE WALLS PLUS FOUR (4) FEET ON EACH SIDE. A MINIMUM VERTICAL CLEARANCE OF AT LEAST TWENTY-FIVE (25) FEET MUST BE PROVIDED ABOVE THIS AREA.
- INGRESS AND EGRESS ROUTES MUST BE DEVELOPED BASED ON SOLID WASTE SWEEP PATH REQUIREMENTS PER SD-SW-4. A MINIMUM HORIZONTAL CLEARANCE OF FOUR (4) FEET FROM THE EDGE OF THE SWEEP PATH AND A MINIMUM VERTICAL CLEARANCE OF AT LEAST FIFTEEN (15) FEET MUST BE PROVIDED ALONG THE ENTIRE SOLID WASTE COLLECTION ROUTE.
- PROVIDE TEN (10) FEET MINIMUM HORIZONTAL CLEARANCE FROM SOLID WASTE ENCLOSURE TO MAJOR ELECTRICAL EQUIPMENT, ABOVE GROUND UTILITY SERVICES, AND EDGE OF OVERHEAD OBSTRUCTIONS SUCH AS TREE BRANCHES, BALCONIES, AND OVERHANGS.
- IF FORWARD ACCESS TO THE PUBLIC STREET IS NOT AVAILABLE FOR THE SOLID WASTE VEHICLE, THE SITE DEVELOPMENT LAYOUT MUST ACCOMMODATE A TURN-AROUND LOCATION MEETING REQUIREMENTS WITHIN SOLID WASTE REFERENCE SPECIFIC TURN-AROUND DETAIL (SD-SW-5) AND ACCEPTABLE TO THE PSA.
- FOR SITES THAT CANNOT ACCOMMODATE A TURN-AROUND, THE FOLLOWING ADDITIONAL REQUIREMENTS MUST BE MET:
 - SOLID WASTE VEHICLES MUST BE ABLE TO SERVICE DUMPSTERS WITHOUT IMPEDING THE PUBLIC STREET OR SIDEWALK.
 - THE COLLECTION LOCATION SHALL BE CLEARLY DELINEATED AND NOT HAVE A SLOPE GREATER THAN 2% IN ANY DIRECTION.
 - BOLLARDS OR ADEQUATE CLEAR SPACE MUST BE PROVIDED BEHIND THE LIFT POINT SO THE DUMPSTERS ARE NOT PUSHED INTO ANY BUILDING OR ACCESS ROUTE.
 - ALL SWEEP-PATH CLEARANCE AND VERTICAL CLEARANCE REQUIREMENTS PREVIOUSLY IDENTIFIED SHALL BE PROVIDED.
 - SOLID WASTE VEHICLE BACK-UP DISTANCES MUST BE LESS THAN 30' ALONG SERVICING ROUTE.
- GATES ON BIN ENCLOSURES SHALL OPEN A MINIMUM OF 120 DEGREES FROM THE CLOSED POSITION. THE GATES SHALL NOT IMPEDE ON THE REQUIRED BIN ENCLOSURE OPENING WIDTH, SHALL NOT BLOCK ADJACENT PARKING SPOTS, AND NOT BE IMPEDED BY ADJACENT CURBS OR LANDSCAPING.
- GATES SHALL BE DESIGNED TO BE FREE STANDING WITHOUT CENTER POLE DESIGN. IF CENTER POLE DESIGN IS NECESSARY, 12 INCHES SHALL BE ADDED TO THE MINIMUM INTERIOR WIDTH OF THE ENCLOSURE.
- GATE DESIGN SHALL INCLUDE A RELIABLE MEANS TO SECURE THE DOOR IN BOTH THE OPEN AND CLOSED POSITIONS.

| | | | |
|----------------------------------|----------------|-----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| SOLID WASTE GENERAL NOTES | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-6A | |

- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF NO PARKING SIGNS ALONG THE SOLID WASTE INGRESS/EGRESS ROUTE TO ENSURE THE ROUTE REMAINS FREE OF VEHICLES.
- REFER TO ASSOCIATED STANDARD DETAILS SD-SW-1 AND SD-SW-2 FOR REQUIREMENTS ON SINGLE AND DOUBLE WIDE SOLID WASTE BIN ENCLOSURE LAYOUT AND DESIGN CRITERIA. THE CITY SHALL HAVE THE ABILITY TO MODIFY OR INTERPRET THESE DETAILS AS NECESSARY TO ACCOMMODATE THE CITY OR CITY CONTRACTOR'S NEEDS FOR SOLID WASTE PICK-UP.
- SOLID WASTE EQUIPMENT ACCESS ROADS AND SERVICE AREA SURFACES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF COLLECTION VEHICLES WEIGHING UP TO 66,000 LBS GROSS VEHICLE WEIGHT (GVW) AND SHALL BE PROVIDED WITH AN APPROVED SURFACE SO AS TO PROVIDE ALL WEATHER DRIVING CAPABILITIES. PROPERTY OWNER SHALL BE RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS.
- FOR SITES THAT CANNOT ACCOMMODATE A STANDARD DUMPSTER ENCLOSURE, THE DUMPSTERS MAY BE ROLLED OUT OF A BUILDING OR ALTERNATE ENCLOSURE BY THE PROPERTY OWNER TO AN APPROVED COLLECTION LOCATION.
- SOLID WASTE COLLECTION LOCATIONS MUST BE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY UNLESS AN APPROPRIATE EASEMENT IS OBTAINED.

| | | | |
|----------------------------------|----------------|-----------------|------------|
| REV. NO. | DATE | DRAWN BY | CHECKED BY |
| SOLID WASTE GENERAL NOTES | | | |
| DR. ENG | CH. ENG | DRAWING NO. | |
| SCALE N.T.S. | DATE 10/1/2022 | SD-SW-6B | |

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STATE OF MICHIGAN
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0 20 40 80
 SCALE: 1" = 40'

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CLIENT
TROWBRIDGE COMPANIES
 2617 BEACON HILL DRIVE
 AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
 PLATT ROAD
 ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS

| | |
|------------------------|-----------|
| OWNER REVIEW | 9/18/2020 |
| CONCEPT REVIEW MEETING | 1/13/2021 |
| SPA/CWRC REVIEW | 1/13/2022 |
| SPA/CWRC RESUBMITTAL | 4/7/2022 |
| WCWRC RESUBMITTAL | 5/3/2022 |
| SPA/CWRC RESUBMITTAL | 6/9/2022 |
| SPA RESUBMITTAL | 9/21/2022 |
| SPA RESUBMITTAL | 12/6/2022 |
| SPA RESUBMITTAL | 2/1/2023 |

ORIGINAL ISSUE DATE:
 SEPTEMBER, 2020

DRAWING TITLE
CITY OF ANN ARBOR SOLID WASTE DETAILS

| | |
|-----------------|-----------|
| PEA JOB NO. | 2020-0151 |
| P.M. | JC |
| DN. | JW |
| DES. | JW |
| DRAWING NUMBER: | |

Site Landscape Calculations

LANDMARK TREE MITIGATION:
 Landmark Trees Removed: 107"
 Landmark Trees Preserved: 107"
 *There are no regulated woodlands on-site, see basal area calculation this sheet

Mitigation Required: 53.5' (107" x 50%)
 Mitigation Provided: 54" (27' - 2" cal. trees)
 Note: See sheet L-3 for planting locations

| SUMMARY TABLE: | NUMBER OF TREES | TOTAL DBH (inches) |
|--------------------------|-----------------|--------------------|
| Landmark Trees Removed | 6 | 107" |
| Landmark Trees Preserved | 4** | 107" |
| Woodland Trees Removed | n/a | n/a |
| Woodland Trees Preserved | n/a | n/a |

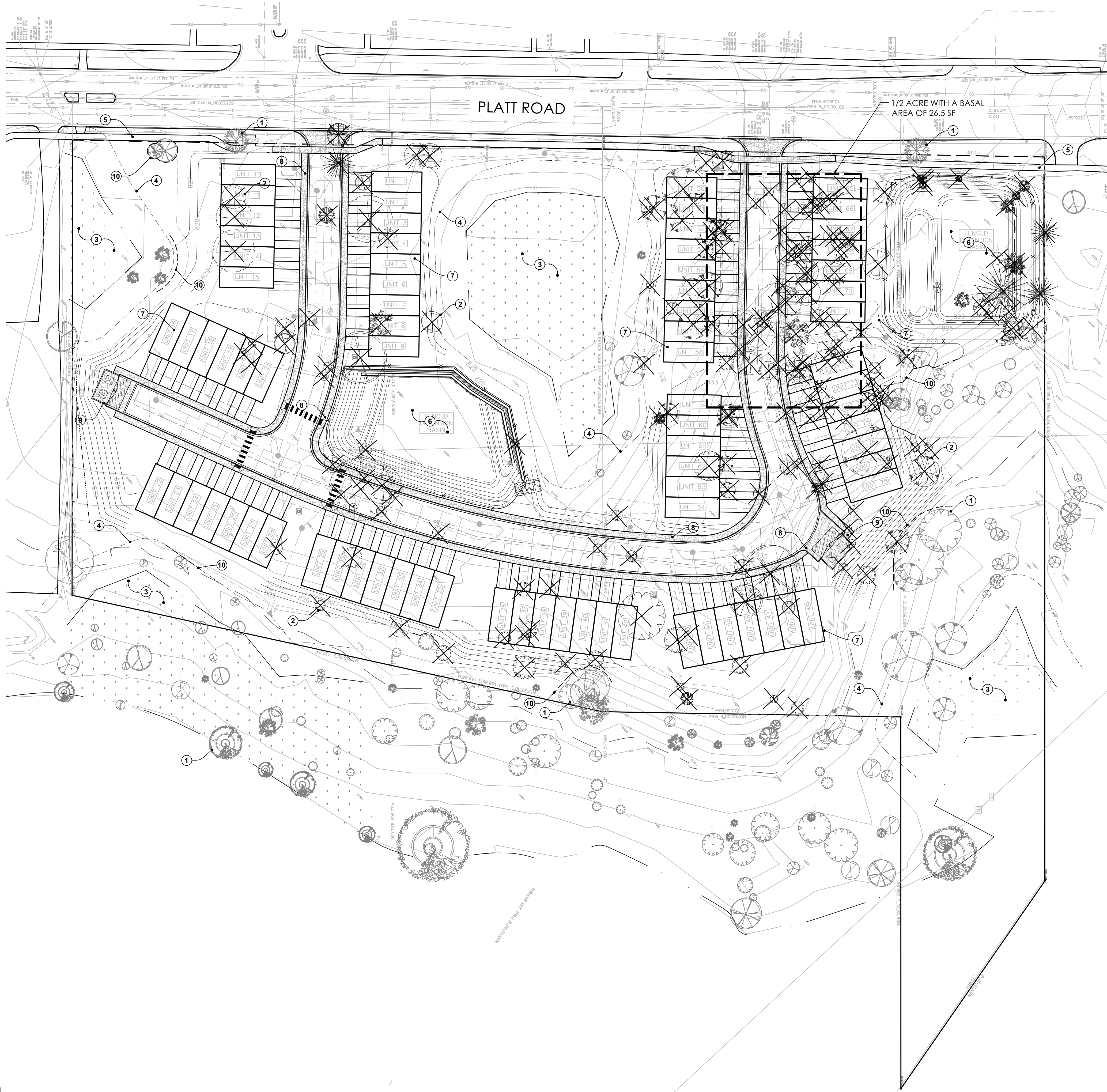
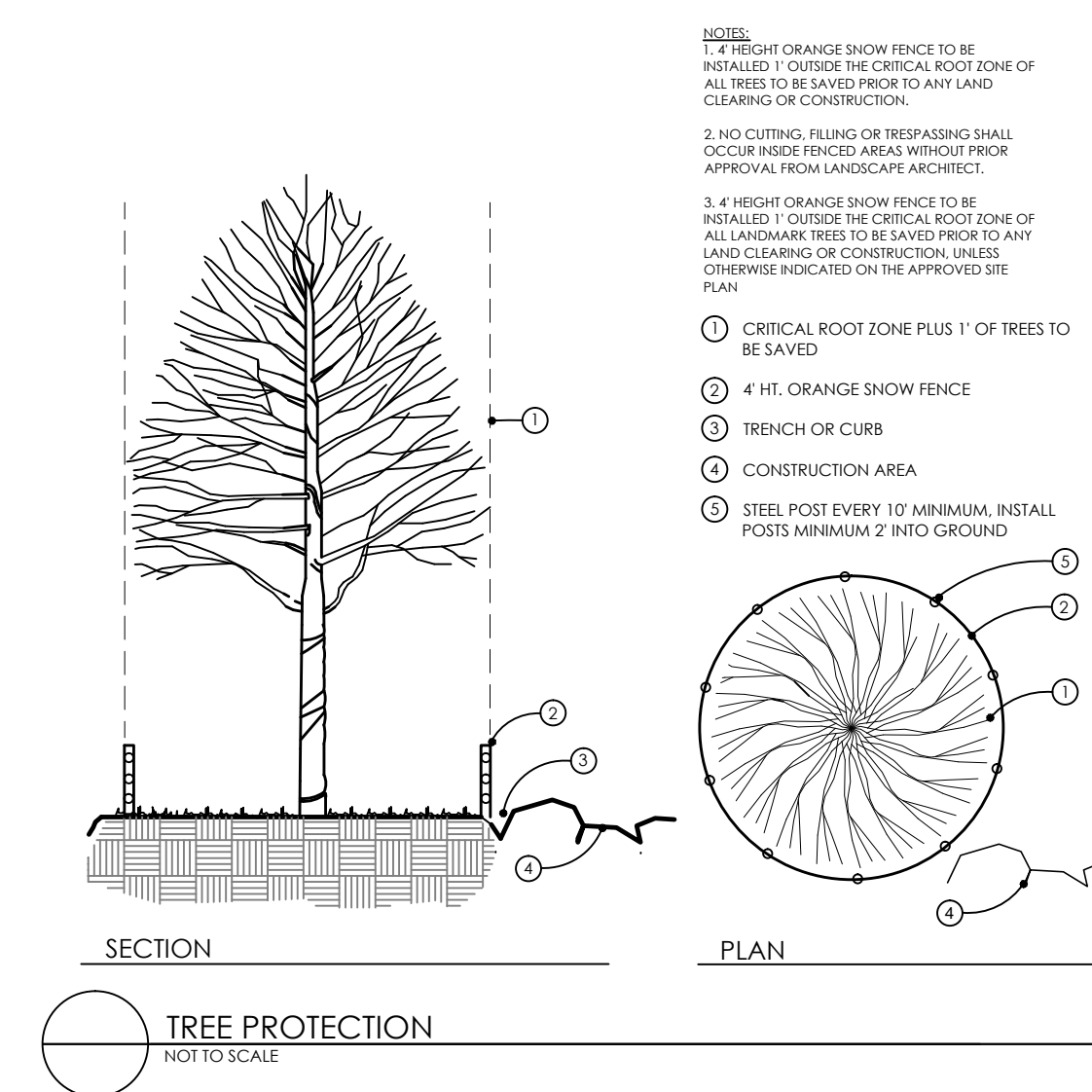
| | | |
|---|------|--------|
| Total Number of Trees Removed | 204* | 1,553" |
| Total Number of Trees Preserved | 42** | 458" |
| *This number reflects only trees 8" dbh and greater | | |
| **This number reflects only trees preserved on-site | | |

Basal Area Calculation:

| Tag No. | DBH | To Get Basal area in square inches | |
|------------|-----|------------------------------------|------------------------|
| | | To Get Radius Divide by 2 | Squared Multiply by Pi |
| 3323 | 12 | 6 | 36 |
| 3324 | 6 | 3 | 9 |
| 3325 | 6 | 3 | 9 |
| 3365 | 8 | 4 | 16 |
| 3366 | 6 | 3 | 9 |
| 3367 | 6 | 3 | 9 |
| 3368 | 7 | 3.5 | 12.25 |
| 3369 | 7 | 3.5 | 12.25 |
| 3370 | 6 | 3 | 9 |
| Sum | | | 381.51 |
| x 10 | | | 3815 |
| / 144 | | | 26.5 |

Note Key:

- ① EXISTING TREE TO REMAIN, SEE TYPICAL TREE PROTECTION DETAIL THIS SHEET
- ② EXISTING TREE TO BE REMOVED, SEE SHEET L-2 FOR TREE INVENTORY LIST, SEE SITE LANDSCAPE CALCULATIONS THIS SHEET
- ③ EXISTING WETLAND
- ④ 25' NATURAL FEATURE SETBACK
- ⑤ EXISTING PUBLIC SIDEWALK
- ⑥ FENCED IN DETENTION BASIN, SEE SHEET L-2
- ⑦ PROPOSED TOWNHOUSE UNIT, SEE ARCHITECTURE AND SHEET L-3 FOR TYPICAL PLANTING PLAN
- ⑧ PROPOSED CONCRETE SIDEWALK
- ⑨ PROPOSED DUMPSTER AND ENCLOSURE, SEE CIVIL ENGINEERING DRAWINGS
- ⑩ TREE PROTECTION FENCING, SEE TYPICAL DETAIL THIS SHEET



Project:
Platt Road Townhomes
 Ann Arbor, Michigan

Project Sponsor:

Trowbridge Homes
 2617 Beacon Hill Drive
 Auburn Hills, MI 48326

Sheet Name:

Tree Preservation & Removal Plan

NOT FOR CONSTRUCTION

Seal:



Drawn: JG
 Checked: JG
 Date: 12.2020
 Scale: 1" = 40'-0"

Project Number:

20.050

Sheet Number:

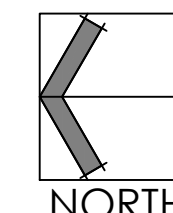
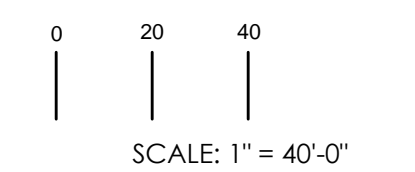
L-1

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SURVEY PROVIDED BY:

REICHERT SURVEYING, INC.
 140 Flumerfelt Lane
 Rochester, MI 48306
 248.651.0592

Job #: 19-178
 Dated: 05.14.2020



12.23.2020 Pre-submittal Meeting
03.05.2021 Site Plan Review
12.09.2021 Revision
04.06.2022 Revision - Site Plan Approval
04.28.2022 Revision per WCWRC
05.18.2022 Revision
09.26.2022 Revision
12.06.2022 SPA Resubmittal

Platt Road Townhomes
Ann Arbor, Michigan

Trowbridge Homes
2617 Beacon Hill Drive
Auburn Hills, MI 48326

Tree Inventory



**NOT FOR
CONSTRUCTION**

Drawn: JG
Checked: JG
Date: 12.2020
Scale: No Scale

20.050

L-2

| TAG # | ELEV. | DESC. | COND. | REMOVE |
|-------|--------|--------------------------|-------|--------|
| 3039 | 827.90 | 10" WALNUT | G | X |
| 3101 | 826.73 | 24" MAPLE | G | |
| 3102 | 824.14 | 14" 22" ELM | F | |
| 3103 | 820.73 | 17" BOXELDER | F | |
| 3104 | 819.66 | 16" WILLOW | P | |
| 3105 | 819.19 | 7" ELM | G | |
| 3106 | 820.77 | 7" 13" MAPLE | G | |
| 3107 | 820.41 | 6" MAPLE | G | |
| 3108 | 820.76 | 9" MAPLE | G | |
| 3109 | 821.14 | 6" MAPLE | G | |
| 3110 | 822.85 | 6" ELM | G | |
| 3111 | 823.49 | 10" WALNUT | G | |
| 3112 | 822.82 | 7" WALNUT | G | |
| 3113 | 822.42 | 11" MAPLE | G | |
| 3114 | 819.44 | 20" WILLOW | P | |
| 3115 | 820.11 | 7" CHERRY | G | |
| 3116 | 821.09 | 7" CHERRY | G | |
| 3117 | 821.70 | 8" CHERRY | G | |
| 3118 | 821.09 | 18" MAPLE | G | |
| 3119 | 820.64 | 6" 9" APPLE | P | |
| 3120 | 819.18 | 12" WILLOW | F | |
| 3121 | 819.20 | 10" 16" WILLOW | F | |
| 3122 | 821.05 | 6" APPLE | F | |
| 3123 | 819.90 | 14" ELM | G | |
| 3124 | 822.18 | 10" MAPLE | G | |
| 3125 | 821.63 | 6" MAPLE | G | |
| 3126 | 821.63 | 14" MAPLE | G | |
| 3127 | 822.48 | 6" CHERRY | G | |
| 3128 | 822.52 | 6" WALNUT | G | |
| 3129 | 822.61 | 6" WALNUT | G | |
| 3130 | 827.63 | 11" 16" ELM | G | X |
| 3131 | 828.05 | 14" ELM | F | X |
| 3132 | 827.12 | 18" ELM | G | X |
| 3133 | 826.94 | 20" HICKORY | G | |
| 3134 | 826.78 | 9" 10" POPLAR | G | |
| 3135 | 826.78 | 12" POPLAR | G | |
| 3136 | 826.75 | 10" APPLE | F | |
| 3137 | 827.14 | 10" APPLE | F | |
| 3138 | 826.91 | 6" 7" APPLE | G | |
| 3140 | 828.57 | 6" 6" 7" 7" MAPLE | G | X |
| 3141 | 829.02 | 7" WALNUT | G | X |
| 3142 | 829.08 | 7" WALNUT | G | X |
| 3143 | 828.30 | 10" 11" APPLE | F | X |
| 3144 | 828.03 | 16" ELM | G | X |
| 3145 | 829.26 | 6" 8" ELM | G | X |
| 3146 | 829.03 | 18" 18" ELM | G | X |
| 3147 | 829.48 | 12" MAPLE | G | X |
| 3148 | 828.92 | 14" PINE | F | X |
| 3149 | 827.56 | 18" OAK | G | X |
| 3150 | 829.52 | 13" HICKORY | G | X |
| 3151 | 829.52 | 11" ELM | G | X |
| 3152 | 829.47 | 16" WALNUT | G | X |
| 3153 | 829.30 | 16" MAPLE | G | X |
| 3154 | 828.96 | 6" WALNUT | G | X |
| 3155 | 828.72 | 9" WALNUT | G | X |
| 3156 | 828.98 | 6" WALNUT | G | X |
| 3157 | 829.34 | 10" WALNUT | G | X |
| 3158 | 829.61 | 6" 6" 7" 10" ELM | F | X |
| 3159 | 828.99 | 7" ELM | F | X |
| 3160 | 828.81 | 13" ELM | G | X |
| 3161 | 828.83 | 6" ELM | G | X |
| 3162 | 829.11 | 9" 9" 10" 10" 11" CHERRY | F | X |
| 3163 | 828.95 | 6" WALNUT | G | X |
| 3164 | 829.96 | 8" WALNUT | G | X |
| 3165 | 829.59 | 6" ELM | G | X |

| TAG # | ELEV. | DESC. | COND. | REMOVE |
|-------|--------|------------------------|-------|--------|
| 3166 | 829.80 | 9" ELM | G | X |
| 3167 | 828.92 | 16" CHERRY | G | X |
| 3168 | 824.38 | 8" CHERRY | G | X |
| 3169 | 825.03 | 7" CHERRY | G | |
| 3170 | 826.12 | 15" WALNUT | G | X |
| 3171 | 825.83 | 6" 6" CHERRY | G | X |
| 3172 | 826.49 | 6" 6" CHERRY | G | |
| 3173 | 825.77 | 10" CHERRY | G | X |
| 3174 | 827.06 | 6" 7" CHERRY | G | X |
| 3175 | 826.65 | 6" CHERRY | G | X |
| 3176 | 825.60 | 6" 12" CHERRY | G | X |
| 3177 | 824.17 | 6" APPLE | G | |
| 3178 | 828.98 | 8" ELM | G | X |
| 3179 | 828.76 | 11" BOXELDER | F | X |
| 3180 | 822.12 | 6" CHERRY | G | |
| 3181 | 822.41 | 6" CHERRY | G | |
| 3182 | 822.10 | 7" CHERRY | G | |
| 3183 | 822.08 | 7" BOXELDER | G | |
| 3184 | 821.99 | 7" 7" CHERRY | G | |
| 3185 | 822.84 | 8" CHERRY | G | |
| 3186 | 822.91 | 8" CHERRY | G | |
| 3187 | 824.47 | 6" 6" 7" CHERRY | G | |
| 3188 | 826.02 | 6" ELM | G | X |
| 3189 | 823.70 | 7" CHERRY | G | |
| 3190 | 823.58 | 6" 7" 7" CHERRY | G | |
| 3191 | 822.91 | 9" 9" APPLE | G | |
| 3192 | 823.57 | 6" 6" 7" 7" CHERRY | G | |
| 3193 | 823.63 | 7" BOXELDER | G | |
| 3194 | 822.51 | 6" 6" CHERRY | G | |
| 3195 | 822.28 | 9" CHERRY | G | |
| 3196 | 821.85 | 11" 11" MAPLE | G | |
| 3197 | 823.41 | 7" MULBERRY | G | |
| 3198 | 822.50 | 9" 11" CHERRY | G | |
| 3199 | 822.23 | 6" CHERRY | G | |
| 3200 | 820.33 | 6" CHERRY | G | |
| 3201 | 820.89 | 6" ELM | G | |
| 3202 | 819.04 | 6" 7" WILLOW | G | |
| 3203 | 819.82 | 10" 12" 16" 19" WILLOW | P | |
| 3204 | 820.62 | 9" CHERRY | F | |
| 3205 | 825.13 | 13" 13" APPLE | P | |
| 3206 | 825.66 | 8" ELM | G | |
| 3207 | 825.75 | 8" 14" ELM | F | |
| 3208 | 825.86 | 9" 10" 12" ELM | F | |
| 3209 | 826.39 | 11" 13" ELM | G | |
| 3210 | 828.46 | 13" CHERRY | G | X |
| 3211 | 831.85 | 9" POPLAR | G | X |
| 3212 | 830.66 | 7" CHERRY | G | X |
| 3213 | 831.37 | 6" 9" 11" 11" CHERRY | G | X |
| 3214 | 831.21 | 6" 7" 7" CHERRY | G | X |
| 3215 | 831.31 | 7" APPLE | G | X |
| 3216 | 830.03 | 6" CHERRY | G | X |
| 3217 | 829.49 | 10" HAWTHORNE | F | X |
| 3218 | 831.31 | 6" 6" CHERRY | G | X |
| 3219 | 829.04 | 6" MAPLE | G | X |
| 3220 | 826.95 | 8" HAWTHORNE | G | |
| 3221 | 826.05 | 15" HAWTHORNE | G | |
| 3222 | 826.22 | 8" HAWTHORNE | G | |
| 3223 | 825.99 | 7" APPLE | G | |
| 3224 | 825.97 | 7" OAK | G | |
| 3225 | 824.51 | 6" 8" APPLE | F | |
| 3226 | 826.20 | 8" ELM | G | |
| 3227 | 820.87 | 7" CHERRY | G | |
| 3228 | 821.05 | 7" CHERRY | G | |
| 3229 | 821.20 | 6" CHERRY | G | |
| 3230 | 821.83 | 9" CHERRY | F | |

| TAG # | ELEV. | DESC. | COND. | REMOVE |
|-------|--------|------------------|-------|--------|
| 3231 | 823.05 | 9" ELM | F | |
| 3232 | 828.06 | 7" WALNUT | G | X |
| 3233 | 823.16 | 13" BOXELDER | F | |
| 3234 | 823.64 | 10" BOXELDER | F | |
| 3235 | 823.89 | 6" MAPLE | G | |
| 3236 | 831.90 | 18" MAPLE | G | |
| 3237 | 832.19 | 9" HICKORY | G | X |
| 3238 | 828.99 | 11" 11" CHERRY | F | X |
| 3239 | 830.86 | 14" PINE | F | X |
| 3240 | 826.78 | 9" CHERRY | G | |
| 3241 | 832.41 | 12" PINE | G | X |
| 3242 | 832.35 | 7" HICKORY | G | X |
| 3243 | 832.74 | 6" 6" APPLE | F | X |
| 3244 | 833.44 | 10" WALNUT | G | X |
| 3245 | 832.72 | 8" 9" APPLE | G | X |
| 3246 | 832.56 | 6" 7" APPLE | F | X |
| 3247 | 832.24 | 6" 6" 6" 6" PINE | F | X |
| 3248 | 831.39 | 7" BOXELDER | F | X |
| 3249 | 829.58 | 16" CHERRY | G | |
| 3250 | 828.61 | 13" CHERRY | P | X |
| 3251 | 827.66 | 9" 9" CHERRY | F | X |
| 3252 | 825.77 | 13" BOXELDER | P | |
| 3253 | 826.38 | 6" ELM | G | X |
| 3254 | 827.07 | 14" BOXELDER | P | |
| 3255 | 828.10 | 10" BOXELDER | F | |
| 3256 | 828.58 | 9" BOXELDER | G | X |
| 3257 | 834.99 | 12" BOXELDER | F | X |
| 3258 | 835.40 | 9" CHERRY | G | X |
| 3259 | 835.38 | 7" BOXELDER | G | X |
| 3260 | 834.93 | 8" WALNUT | G | X |
| 3261 | 833.29 | 6" 6" APPLE | F | X |
| 3262 | 832.56 | 6" CHERRY | G | X |
| 3263 | 832.38 | 6" 7" CHERRY | G | X |
| 3264 | 831.45 | 6" CHERRY | G | X |
| 3265 | 834.65 | 9" BOXELDER | G | X |
| 3266 | 834.67 | 6" BOXELDER | G | X |
| 3267 | 834.47 | 7" CHERRY | G | X |
| 3268 | 834.48 | 8" CHERRY | G | X |
| 3269 | 834.53 | 9" CHERRY | F | |
| 3270 | 834.14 | 7" CHERRY | G | |
| 3271 | 833.77 | 6" 11" BOXELDER | F | |
| 3272 | 833.69 | 10" CHERRY | G | |
| 3273 | 829.57 | 7" CHERRY | G | |
| 3274 | 829.08 | 7" CHERRY | G | |
| 3275 | 829.06 | 6" CHERRY | G | |
| 3276 | 828.76 | 9" POPLAR | G | |
| 3277 | 828.13 | 7" CHERRY | G | |
| 3278 | 827.42 | 7" CHERRY | G | |
| 3279 | 826.63 | 6" CHERRY | G | X |
| 3280 | 825.52 | 9" 15" BOXELDER | P | X |
| 3281 | 827.04 | 7" CHERRY | G | X |
| 3282 | 827.75 | 7" CHERRY | G | X |
| 3283 | 832.75 | 20" 20" BOXELDER | P | X |
| 3284 | 832.63 | 17" WALNUT | G | X |
| 3285 | 832.43 | 10" MULBERRY | F | X |
| 3286 | 826.71 | 8" WALNUT | G | X |
| 3287 | 825.45 | 7" WALNUT | G | X |
| 3288 | 835.39 | 10" WALNUT | G | X |
| 3289 | 836.16 | 11" ELM | G | X |
| 3290 | 836.01 | 6" ELM | G | X |
| 3291 | 834.52 | 6" ELM | G | X |
| 3292 | 835.69 | 8" ELM | F | X |
| 3293 | 835.26 | 9" BOXELDER | F | X |
| 3294 | 835.29 | 13" BOXELDER | F | X |
| 3295 | 835.41 | 12" ELM | G | X |

| TAG # | ELEV. | DESC. | COND. | REMOVE |
|-------|--------|------------------|-------|--------|
| 3296 | 835.30 | 10" ELM | F | X |
| 3297 | 835.49 | 7" WALNUT | G | X |
| 3298 | 835.56 | 7" WALNUT | G | X |
| 3299 | 836.66 | 11" ELM | G | X |
| 3300 | 836.73 | 6" 9" 9" 9" ELM | F | X |
| 3301 | 835.49 | 10" BOXELDER | F | X |
| 3302 | 836.63 | 9" 9" ELM | G | X |
| 3303 | 837.21 | 11" CEDAR | G | X |
| 3304 | 836.25 | 13" ELM | G | X |
| 3305 | 836.27 | 13" ELM | G | X |
| 3306 | 835.42 | 14" ELM | G | X |
| 3307 | 836.59 | 11" 13" APPLE | P | X |
| 3308 | 834.96 | 6" ELM | G | X |
| 3309 | 834.37 | 11" ELM | F | X |
| 3310 | 834.95 | 6" ELM | G | X |
| 3311 | 835.27 | 7" ELM | G | X |
| 3312 | 835.63 | 7" ELM | G | X |
| 3313 | 835.60 | 7" ELM | G | X |
| 3314 | 835.80 | 9" 10" ELM | G | X |
| 3315 | 834.15 | 9" ELM | G | X |
| 3316 | 833.56 | 17" ELM | G | X |
| 3317 | 831.97 | 7" ELM | G | X |
| 3318 | 831.25 | 8" ELM | G | X |
| 3319 | 831.66 | 7" ELM | G | X |
| 3320 | 831.64 | 9" ELM | G | X |
| 3321 | 834.30 | 6" 7" 11" ELM | G | X |
| 3322 | 830.45 | 18" WALNUT | G | X |
| 3323 | 829.69 | 12" ELM | F | X |
| 3324 | 830.11 | 6" 6" ELM | G | X |
| 3325 | 830.13 | 6" 6" ELM | G | X |
| 3326 | 835.05 | 7" ELM | G | X |
| 3327 | 830.96 | 10" ELM | G | X |
| 3328 | 831.07 | 7" ELM | G | X |
| 3329 | 833.01 | 10" ELM | G | X |
| 3330 | 831.84 | 12" ELM | G | X |
| 3331 | 832.97 | 8" 8" 9" ELM | G | X |
| 3332 | 831.37 | 9" 13" ELM | G | X |
| 3333 | 833.37 | 8" ELM | G | X |
| 3334 | 834.91 | 9" 9" ELM | G | X |
| 3335 | 832.22 | 6" 6" CHERRY | G | X |
| 3336 | 829.87 | 12" BOXELDER | F | X |
| 3337 | 829.05 | 10" 13" BOXELDER | F | X |
| 3338 | 829.02 | 7" BOXELDER | P | X |
| 3339 | 828.32 | 14" BOXELDER | G | X |
| 3340 | 826.72 | 7" APPLE | F | X |
| 3341 | 826.98 | 6" CHERRY | G | X |
| 3342 | 828.02 | 10" ELM | G | X |
| 3343 | 825.72 | 7" ELM | G | X |

General Notes

- UTILITY BOXES WILL BE SCREENED ON 3 SIDES.
- ALL DISTURBED AREAS TO BE SOED OR SEED.
- SNOW SHALL BE STORED IN BUILDING ISLANDS AND ALONG STREETS. STORAGE SHALL NOT INCLUDE DETENTION AREAS OR LANDSCAPED AREAS.
- TREES SHALL BE PLANTED A MINIMUM OF 5'-8" FROM ALL UTILITY LEADS.

Additional Notes

Continuing Care
Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse. All landscape materials shall be maintained by a regular program of mowing, watering, weeding, feeding and pruning. 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.

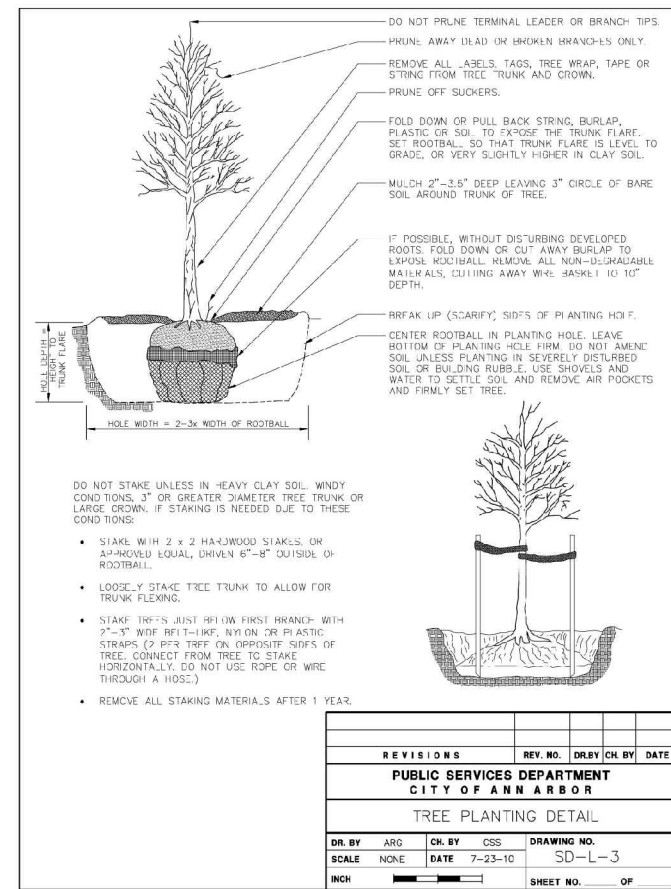
Replenishment
All dead or diseased plant material shall be removed and replaced within six (6) months after it dies or in the next planting season, whichever occurs first.

Watering
This shall be accomplished by installation of hose bibs on each building. Hose bibs shall be located a minimum of 150' from any landscaped area.

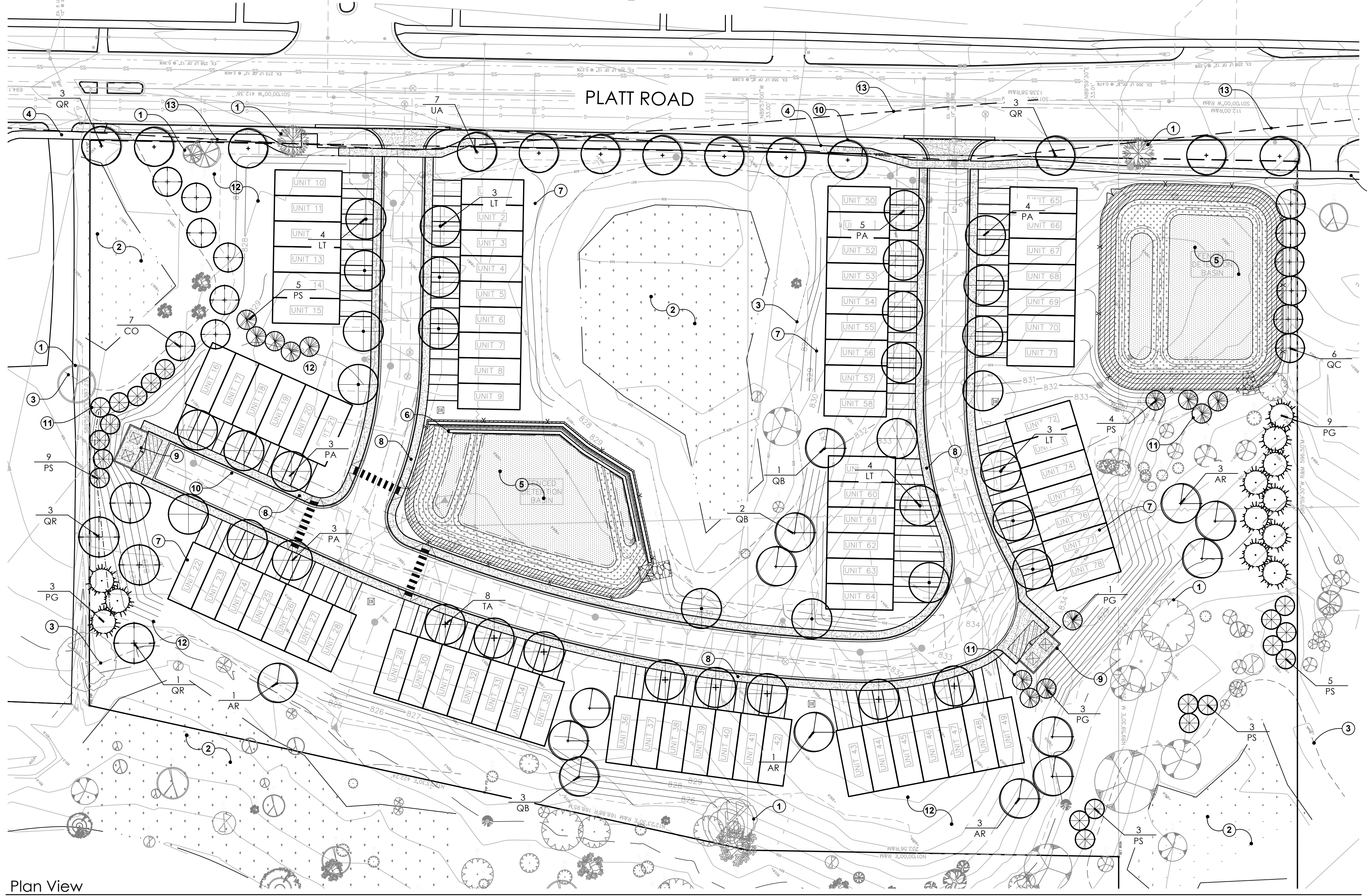
Clay Soils
Construct Earth Bed to Required Grade and Trim. Prior to Placement of Topsoil or Compost, Harrow all Earth Beds to a Minimum of 12" Depth.

Fertilizer
Beyond initial fertilization, all future fertilizer applications shall not contain phosphorus. No chemicals are allowed in stormwater features or buffer zones with the following exception: invasive species may be treated with chemicals by a certified applicator.

Substitutions
All vegetation species deviations or substitutions must be approved in writing by the City of Ann Arbor prior to planting.



- REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNDESIRABLE OR COULD CAUSE GROUNDING.
 - STAKE TREES WITH 2" X 4" WIDE BELL-CURVED FABRIC STRAPS ONLY. ANCHOR TO ONE APPROVED EQUAL CONNECTION FROM TREE TO STAKE. REMOVE FROM EACH OTHER END OF STAKE FOR TREE TO MOVE. DO NOT USE WIRE OR ROPE THROUGH A HOLE. REMOVE AFTER ONE YEAR.
 - DO NOT HARROW/COULD/STAKE OR EQUIVALENT DRIVEN 4" OUTSIDE OF ROOTBALL. REPAIR ONE YEAR.
 - COVER PLANTING WITH 2" SHROUDED HARDWOOD BARK MULCH. MINIMUM 4" DIAMETER. CONNECT EVERGREENS PLANTINGS WHERE POSSIBLE.
 - REMOVE ALL HIGH BIODEGRADABLE MATERIALS FROM THE ROOTBALL. TOUGH DOWN ALL BURLAP AND REMOVE WIRE BASKET FROM THE TOP AND REMOVE THE ROOTBALL.
 - PLANT W/ SEE GENERAL LANDSCAPE NOTES SHEET 1.5 AND SPECIFIC AREA SPACED.
 - TREE PIT TO BE 3 TIMES WIDTH OF ROOTBALL.
 - PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES.
- NOTES:
1. STAKE EVERGREENS UNDER 12' HEIGHT
2. CUT EVERGREENS 12' HEIGHT AND OVER
3. NEVER CUT OR PRUNE CENTRAL LEADER
4. SET STAKES VERTICAL AND EVENLY SPACED
5. PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES



Plan View
SCALE: 1" = 40'-0"

Detention Basin Seed Mixes:

| Emergent Wetland Seed Mix | | Low-Profile Prairie Seed Mix | | Stormwater Seed Mix | |
|---|----------------------|------------------------------|---------------------------------|--------------------------|-----------------|
| Botanical Name | Common Name | PLS Quince/Acre | Botanical Name | Common Name | PLS Quince/Acre |
| Permanent Grasses/Sedges/Rushes: | | | Perennial Grasses: | | |
| <i>Carex comosa</i> | Binary Sedge | 2.50 | <i>Carex sp.</i> | Common Sedge Mix | 1.00 |
| <i>Carex lasiocoma</i> | Common Lake Sedge | 3.25 | <i>Carex canadensis</i> | Canada Wild Rice | 1.00 |
| <i>Carex lurida</i> | Butterbrush Sedge | 4.00 | <i>Koeleria gracilis</i> | June Grass | 2.00 |
| <i>Carex vulpinoidea</i> | Brown Fox Sedge | 6.00 | <i>Phleum vulgatum</i> | Swain Grass | 2.00 |
| <i>Sclerostoma ovata</i> | Blunt Spike Rush | 1.00 | <i>Lolium multiflorum</i> | Lolium | 21.00 |
| <i>Juncus effusus</i> | Common Rush | 1.00 | Temporary Cover: | | |
| <i>Leersia oryzoides</i> | Rice Cut Grass | 3.00 | <i>Avena sativa</i> | Common Oat | 360.00 |
| <i>Scirpus setosus</i> | Hard-Stemmed Bulrush | 2.50 | <i>Lolium multiflorum</i> | Annual Ryegrass | 120.00 |
| <i>Scirpus pungens</i> | Chambers's Rush | 4.00 | Total: | | 480.00 |
| <i>Scirpus validus</i> | Great Bulrush | 6.00 | Forbs: | | |
| Total: | | 30.25 | <i>Anemone cylindrica</i> | Thriftweed | 0.50 |
| Temporary Cover: | | | <i>Asplenium platyneuron</i> | Wet Columbine | 0.50 |
| <i>Avena sativa</i> | Common Oat | 360.00 | <i>Asplenium adnigrum</i> | Butterfly Milkweed | 2.00 |
| <i>Lolium multiflorum</i> | Annual Ryegrass | 104.00 | <i>Asplenium adnigrum</i> | Heart's Ease | 0.25 |
| Total: | | 464.00 | <i>Asplenium adnigrum</i> | Spotted Blue Aster | 0.25 |
| Forbs: | | | <i>Asplenium adnigrum</i> | New England Aster | 0.25 |
| <i>Asplenium platyneuron</i> | Swamp Milkweed | 1.50 | <i>Asplenium adnigrum</i> | White Wild-Indigo | 1.00 |
| <i>Asplenium platyneuron</i> | Water Plantain | 2.00 | <i>Chamaecrista fasciculata</i> | Partridge Pea | 1.00 |
| <i>Asplenium platyneuron</i> | Button Bush | 1.00 | <i>Cirsium lanceolatum</i> | Ranch Coneflower | 1.50 |
| <i>Asplenium platyneuron</i> | Swamp Loosestrife | 1.25 | <i>Cirsium discolor</i> | White Prairie Clover | 1.50 |
| <i>Asplenium platyneuron</i> | Spotted Joe-Pye Weed | 0.50 | <i>Kuhnia eupatorioides</i> | Bald Bone-Set | 0.50 |
| <i>Asplenium platyneuron</i> | Blue Flag Iris | 6.00 | <i>Lactuca scariola</i> | Round-headed Bush Clover | 2.00 |
| <i>Asplenium platyneuron</i> | Cardinal Flower | 0.25 | <i>Lactuca scariola</i> | Rough Blazing Star | 0.50 |
| <i>Asplenium platyneuron</i> | Great Blue Lobelia | 1.50 | <i>Lactuca scariola</i> | Wild Lettuce | 0.50 |
| <i>Asplenium platyneuron</i> | Seedbox | 0.25 | <i>Asplenium platyneuron</i> | White Bergamot | 1.00 |
| <i>Asplenium platyneuron</i> | Monkey Flower | 1.00 | <i>Asplenium platyneuron</i> | Flagpole Beard Tongue | 0.50 |
| <i>Asplenium platyneuron</i> | Phlox paniculata | 1.00 | <i>Asplenium platyneuron</i> | Common A. (various) | 4.00 |
| <i>Asplenium platyneuron</i> | Artemisia annua | 1.00 | <i>Asplenium platyneuron</i> | Wild Senna | 1.00 |
| <i>Asplenium platyneuron</i> | Pickered Weed | 10.00 | <i>Asplenium platyneuron</i> | Purple Meadow Rue | 2.00 |
| <i>Asplenium platyneuron</i> | Broad-Leaf Arrowweed | 2.00 | Total: | | 20.50 |
| <i>Asplenium platyneuron</i> | American Bur Reed | 4.00 | | | |
| <i>Asplenium platyneuron</i> | Blue Vervain | 1.00 | | | |
| Total: | | 60.25 | | | |

Stormwater Seed Mix

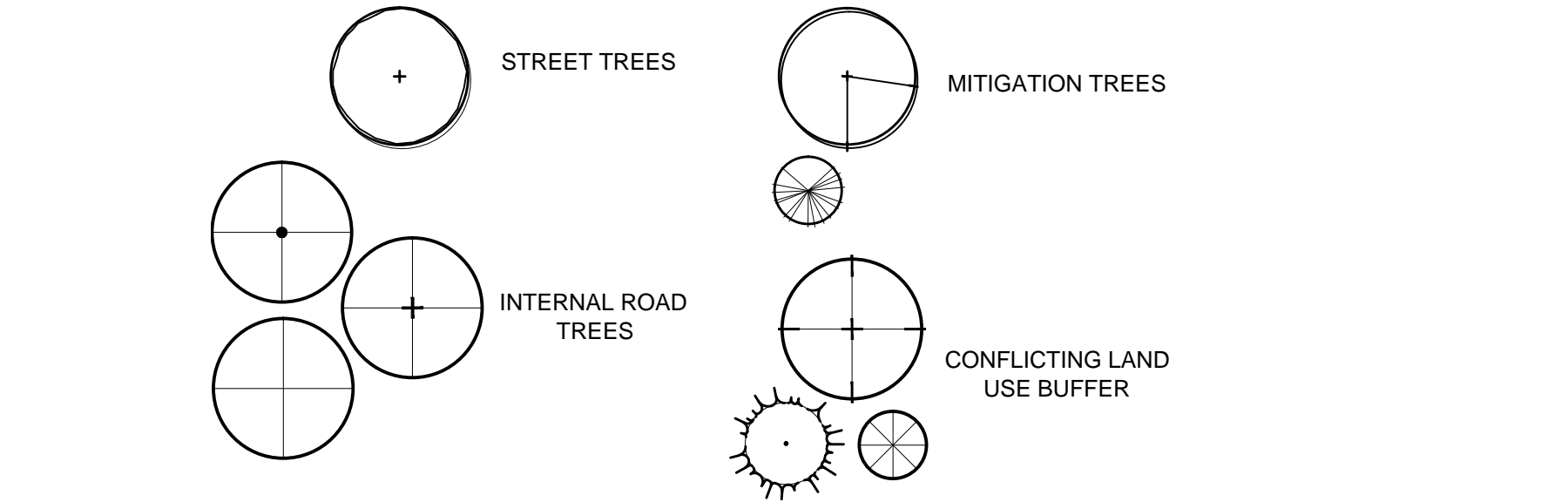
| Botanical Name | Common Name | PLS Quince/Acre | Seeds/Oz | Seeds/SQ FT |
|------------------------------|------------------------------|-----------------|---------------|-------------|
| <i>Carex ostenata</i> | Orsted Oval Sedge | 1.00 | 69000 | 1.35 |
| <i>Carex lurida</i> | Butterbrush Sedge | 2.00 | 12000 | 0.95 |
| <i>Carex lasiocoma</i> | Brown Fox Sedge | 6.00 | 120000 | 17.22 |
| <i>Elymus virginicus</i> | Virginia Wild Ryegrass | 12.00 | 4375 | 1.21 |
| <i>Elymus repens</i> | Field Hair Grass | 1.25 | 32500 | 3.58 |
| <i>Juncus effusus</i> | Common Rush | 1.00 | 281000 | 6.45 |
| <i>Juncus tenuis</i> | Tanney's Rush | 0.25 | 154000 | 0.91 |
| <i>Leersia oryzoides</i> | Rice Cut Grass | 1.00 | 84500 | 2.17 |
| <i>Scirpus setosus</i> | Hard-STEMMED BULRUSH | 2.50 | 26366 | 5.21 |
| <i>Scirpus validus</i> | Great Bulrush | 6.00 | 167500 | 4.30 |
| <i>Scirpus setosus</i> | Hard-STEMMED BULRUSH | 2.50 | 26366 | 5.21 |
| <i>Scirpus validus</i> | Great Bulrush | 6.00 | 37813 | 5.21 |
| Total: | | 46.25 | 676.38 | |
| Temporary Cover: | | | | |
| <i>Avena sativa</i> | Common Oat | 360.00 | 9125 | 67.15 |
| <i>Lolium multiflorum</i> | Annual Ryegrass | 104.00 | 14988 | 32.57 |
| Total: | | 464.00 | 196.72 | |
| Forbs & Shrubs: | | | | |
| <i>Alnus spp.</i> | Swamp Milkweed | 1.50 | 4540 | 0.95 |
| <i>Asplenium platyneuron</i> | Water Plantain (various mix) | 4.25 | 79175 | 6.95 |
| <i>Asplenium platyneuron</i> | Swamp White Oak | 2.00 | 14175 | 0.65 |
| <i>Asplenium platyneuron</i> | Scarlet Oak | 2.00 | 14175 | 0.65 |
| <i>Asplenium platyneuron</i> | Red Oak | 2.50 | 25600 | 1.35 |
| <i>Asplenium platyneuron</i> | Redmond American Basswood | 1.00 | 26500 | 0.91 |
| <i>Asplenium platyneuron</i> | American Elm 'Valley Forge' | 2.50 | 3663 | 0.41 |
| <i>Asplenium platyneuron</i> | White Spruce | 7-8' ht. | as shown | B&B |
| <i>Asplenium platyneuron</i> | Eastern White Pine | 7-8' ht. | as shown | B&B |
| <i>Asplenium platyneuron</i> | Swamp White Oak | 2-3' cal. | as shown | B&B |
| <i>Asplenium platyneuron</i> | Scarlet Oak | 2-3' cal. | as shown | B&B |
| <i>Asplenium platyneuron</i> | Red Oak | 2-3' cal. | as shown | B&B |
| <i>Asplenium platyneuron</i> | Redmond American Basswood | 2-3' cal. | as shown | B&B |
| <i>Asplenium platyneuron</i> | American Elm 'Valley Forge' | 2-3' cal. | as shown | B&B |

Plant Schedule

TREES

| QTY | SYM | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | ROOT | COMMENTS |
|-----|-----|--|------------------------------|-----------|----------|------|-------------------------------|
| 8 | AR | <i>Acer rubrum</i> | Red Maple - straight species | 2.0" cal. | as shown | B&B | Single straight trunk |
| 7 | CO | <i>Celtis occidentalis</i> | Northern Hackberry | 2.0" cal. | as shown | B&B | Single straight trunk |
| 14 | LT | <i>Liriodendron tulipifera</i> | Tulip Tree | 2.5" cal. | as shown | B&B | Single straight trunk |
| 15 | PA | <i>Platanus x acerifolia 'Bloodgood'</i> | Bloodgood London Plane Tree | 2.5" cal. | as shown | B&B | Single straight trunk |
| 16 | PG | <i>Picea glauca</i> | White Spruce | 7-8' ht. | as shown | B&B | Unsheared, branched to ground |
| 29 | PS | <i>Pinus strobus</i> | Eastern White Pine | 7-8' ht. | as shown | B&B | Unsheared, branched to ground |
| 6 | QB | <i>Quercus bicolor</i> | Swamp White Oak | 2.0" cal. | as shown | B&B | Single straight trunk |
| 6 | QC | <i>Quercus coccinea</i> | Scarlet Oak | 2.0" cal. | as shown | B&B | Single straight trunk |
| 10 | QR | <i>Quercus rubra</i> | Red Oak | 2.5" cal. | as shown | B&B | Single straight trunk |
| 8 | TA | <i>Tilia americana 'Redmond'</i> | Redmond American Basswood | 2.5" cal. | as shown | B&B | Single straight trunk |
| 7 | UA | <i>Ulmus americana 'Valley Forge'</i> | American Elm 'Valley Forge' | 2.5" cal. | as shown | B&B | Single straight trunk |

Legend



Site Landscape Calculations

STREET TREE REQUIREMENT:
1 Deciduous shade tree / 45 lf of R.O.W length is required
Row of Way Length: 756 lf

Street Trees Required: 17 (756 lf / 45)
Street Trees Provided: 17 (4 are existing to remain)**

PRIVATE STREETS (Internal roads):

Minimum of 1 deciduous or evergreen tree / 15 lf. of buffer
Conflicting Land Use Buffer North Property Line: 387 lf.
Conflicting Land Use Buffer South Property Line: 596 lf.

Street Trees Required: 37 (1,105 lf / 30)
Street Trees Provided: 37

CONFLICTING LAND USE BUFFER:

Minimum of 1 deciduous or evergreen tree / 15 lf. of buffer
Conflicting Land Use Buffer North Property Line: 387 lf.
Conflicting Land Use Buffer South Property Line: 596 lf.

North Property Line
Total Trees Required: 26 = (387 / 15)
Total Trees Provided: 26 (23 New trees and 3 Existing trees)

South Property Line
Total Trees Required: 40 = (596 / 15)
Total Trees Provided: 40 (26 New trees and 14 Existing trees)

Note Key:

- EXISTING TREE TO REMAIN. SEE TYPICAL TREE PROTECTION DETAIL SHEET L-1
- EXISTING WETLAND TO REMAIN
- 25' NATURAL FEATURE SETBACK
- EXISTING PUBLIC SIDEWALK
- FENCED IN DETENTION BASIN. SEE SEED MIX THIS SHEET
- PROPOSED RETAINING WALL. SEE CIVIL ENGINEERING DRAWINGS
- PROPOSED TOWNHOUSE UNIT. SEE ARCHITECTURE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DUMPSTER AND ENCLOSURE. SEE CIVIL ENGINEERING DRAWINGS
- DECIDUOUS CANOPY TREE. SEE TYPICAL DETAIL
- EVERGREEN TREE PLANTING. SEE TYPICAL DETAIL
- SEEDED LAWN OVER MINIMUM 3" DEPTH TOPSOIL. ALL DISTURBED AREAS
- CLEAR VISION SITE LINES. SEE SHEET P-3.2

NOT FOR CONSTRUCTION



Drawn: JG
Checked: JG
Date: 12.2020
Scale: 1" = 40'-0"

Project Number: 20.050
Sheet Number: L-3
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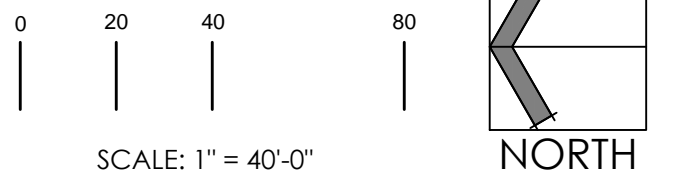
Issued For:
12.23.2020 Pre-submittal Meeting
03.05.2021 Site Plan Review
12.09.2021 Revision
01.18.2022 Revision
04.06.2022 Revision - Site Plan Approval
04.28.2022 Revision per WCWRC
05.18.2022 Revision
09.26.2022 Revision
12.06.2022 SPA Resubmittal
12.21.2022 Revision per City
02.01.2023 Revision per City

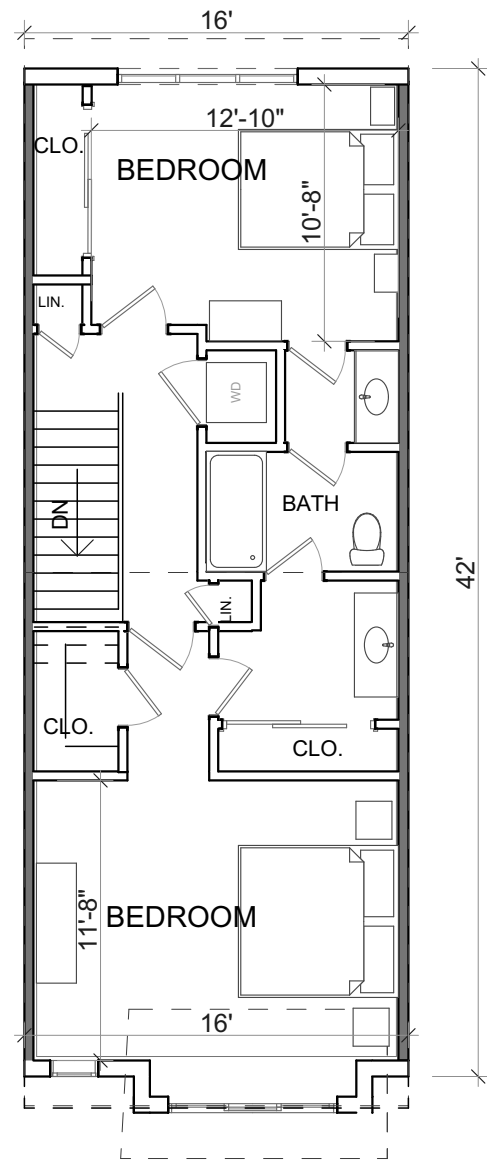
Project:
Platt Road Townhomes
Ann Arbor, Michigan

Project Sponsor:
Trowbridge Homes
2617 Beacon Hill Drive
Auburn Hills, MI 48326

Sheet Name:

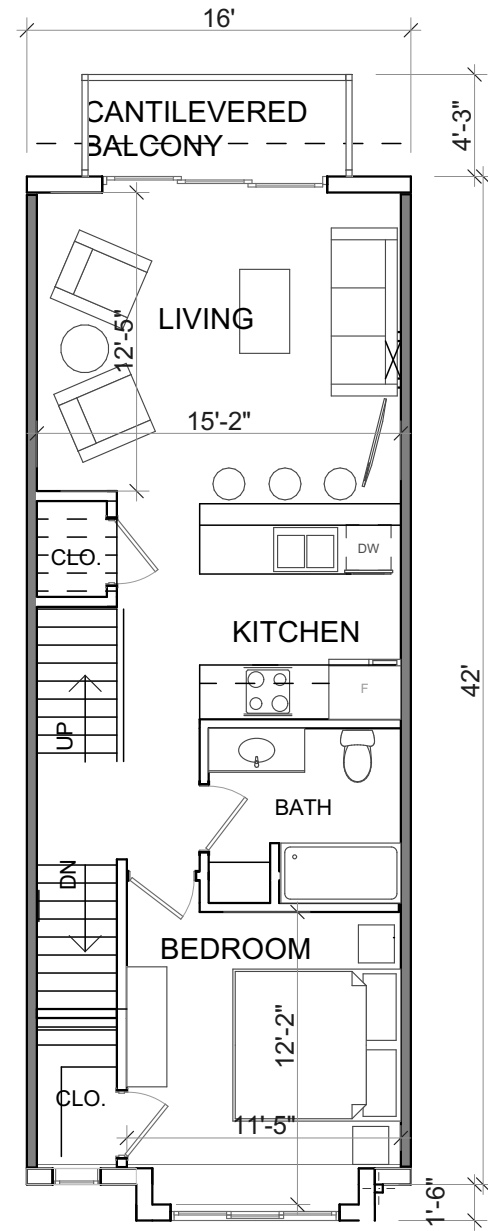
Landscape Plan





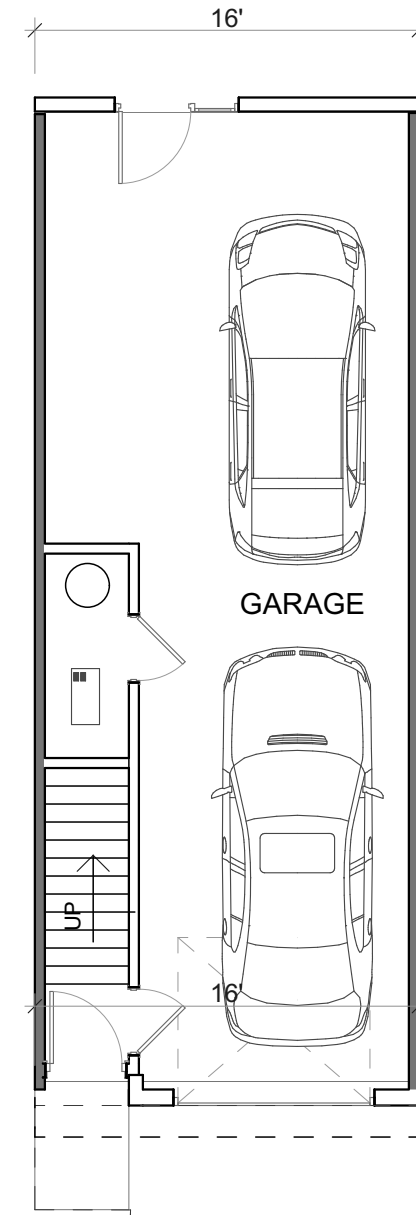
3rd Floor

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



2nd Floor

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



1st Floor

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

Bill Jarratt
248-446-1100
billj@jarrattarchitecture.com

www.JarrattArchitecture.com

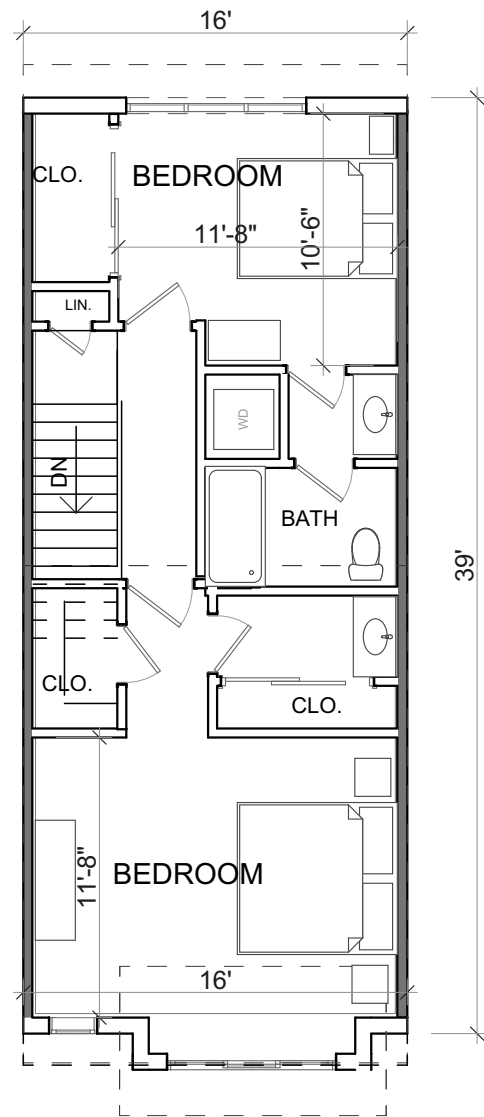
108 N. Lafayette
South Lyon, MI 48178

**Platt Rd
Townhomes**
Ann Arbor, MI

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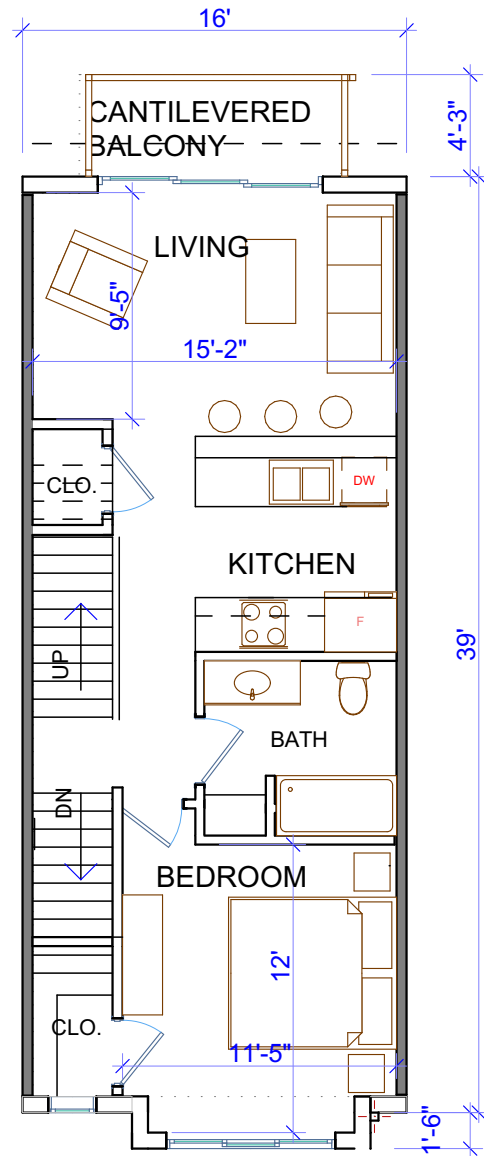
| | |
|------------|---------------|
| 1/30/2023 | Concept Plans |
| Issue Date | DESCRIPTION |

UNIT 42ft
CONCEPT
PLANS
A-103



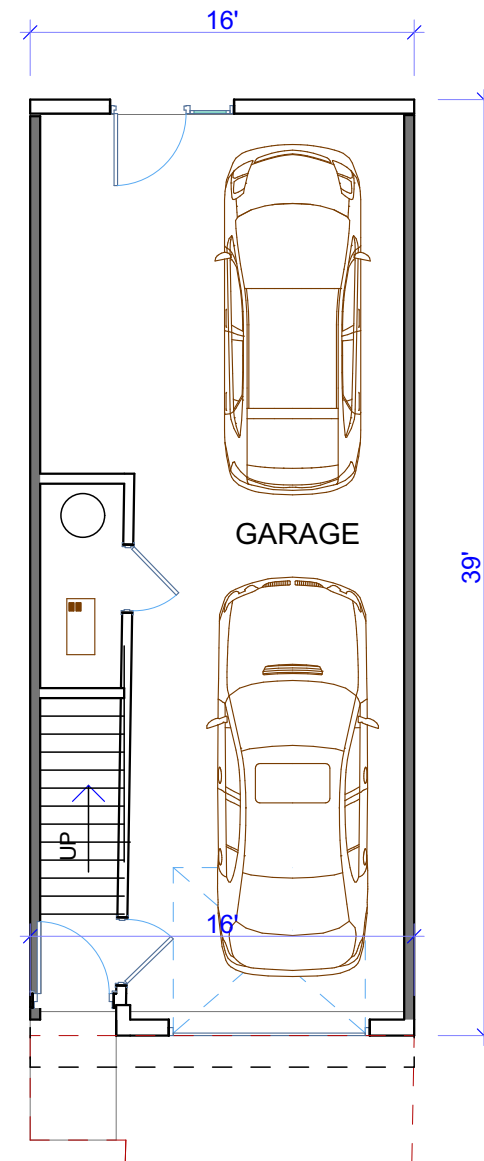
3rd Floor

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



2nd Floor

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



1st Floor

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

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108 N. Lafayette
South Lyon, MI 48178

**Platt Rd
Townhomes**
Ann Arbor, MI

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| 1/30/2023 | Concept Plans |
| Issue Date | DESCRIPTION |

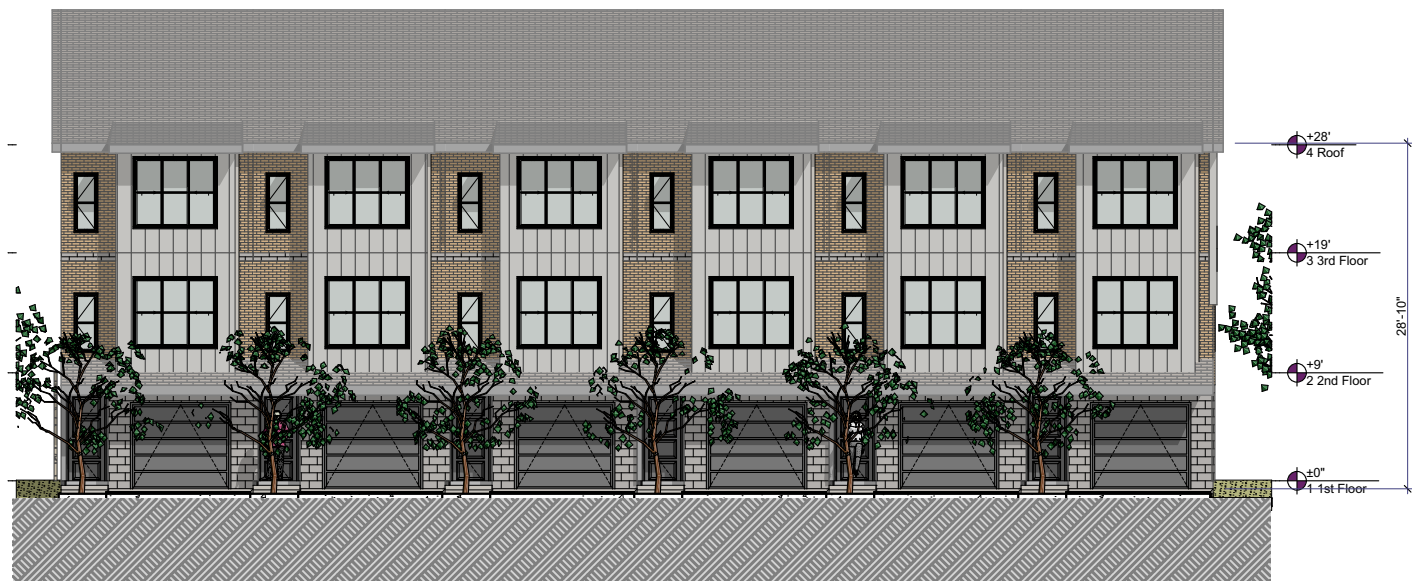
UNIT 39 ft.
CONCEPT
PLANS
A-104



3 REAR ELEVATION
SCALE: 1/16" = 1'-0"



2 SIDE ELEVATION
SCALE: 1/16" = 1'-0"



1 FRONT ELEVATION
SCALE: 1/16" = 1'-0"



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| 2/1/2023 | Concept Plans |
| Issue Date | DESCRIPTION |

ELEVATIONS

A-105

