CIVIL SITE PLAN

WEST CEDAR APARTMENTS

Site Plan Review
Received: 6/5/2026
City of Kalamazoo
E.Szymanski

116 W. Cedar St
KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
6/3/26

OWNER

116 WEST CEDAR, LLC
4200 W CENTRE AVE.
PORTAGE, MI 49024

PLANS PREPARED BY:

hurley & stewart, llc
2800 s. 11th street
kalamazoo, michigan 49009
269.552.4960 fax 269.552.4961
www.hurleystewart.com

CONSTRUCTION MANAGER:

AVB CONSTRUCTION, LLC
4200 W. CENTRE AVE.
PORTAGE, MI 49024

ARCHITECT

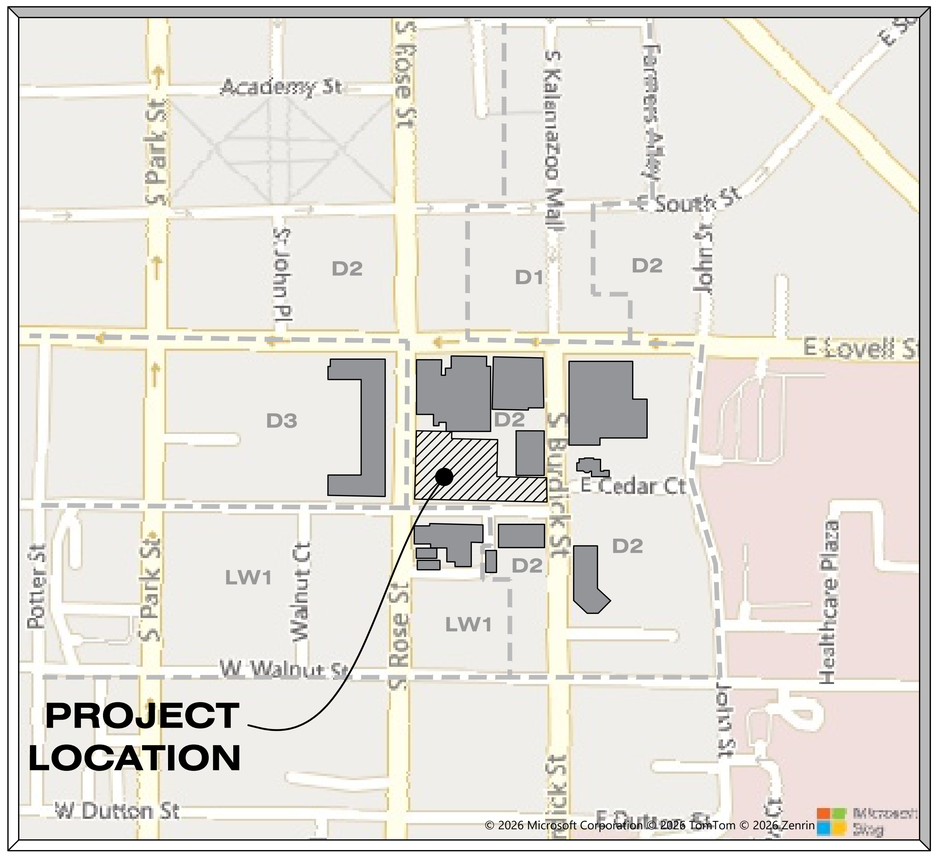
PAPPAGEORGE HAYMES PARTNERS
640 NORTH LASALLE SUITE 400
CHICAGO, ILLINOIS 60654

LANDSCAPE ARCHITECT:

DANIEL WEINBACH & PARTNERS, LTD.
1142 W. MADISON ST. SUITE 206
CHICAGO, IL 60607

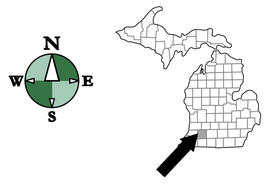
UTILITY CONTACTS:

CONSUMERS ENERGY CO. MIKE SOKOLOV 2500 E. CORK STREET KALAMAZOO, MI 49001 269.337.2246	ELECTRIC
CONSUMERS ENERGY CO. KYLE OAK 2500 E. CORK STREET KALAMAZOO, MI 49001 269.337.2366	GAS
CHARTER COMMUNICATIONS MARK BURKE 4176 COMMERCIAL AVE. PORTAGE, MI 49002 269.217.8152	CABLE TELEVISION
AT&T TODD SHIBAYAMA 2919 MILLCORK ST. KALAMAZOO, MI 49001 269.384.4436	TELEPHONE
CITY OF KALAMAZOO	WATER/SANITARY



SITE LOCATION MAP

SCALE: 1" = 200'



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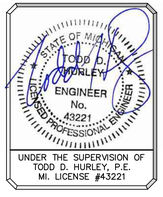


UNDER THE SUPERVISION OF
TODD D. HURLEY, P.E.
MI. LICENSE #43221

PRELIMINARY
NOT FOR CONSTRUCTION

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

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC

ISSUED FOR:
CITY OF KALAMAZOO SITE PLAN SUBMITTAL
6/3/26

BENCHMARKS

ELEVATIONS OF THIS SURVEY ARE BASED ON NAVD 88 AS DERIVED FROM GPS

BM 1 EL = 788.72'
CUT X IN SOUTHWEST BURY BOLT ON HYDRANT ON THE WEST SIDE OF S ROSE ST 90'± SOUTH OF THE CENTERLINE OF LOVELL ST.

BM 2 EL = 788.17'
CUT X ON SOUTHWEST BOLT OF HYDRANT ON THE WEST SIDE OF S BURDICK ST 239'± SOUTH OF THE CENTERLINE OF LOVELL ST.

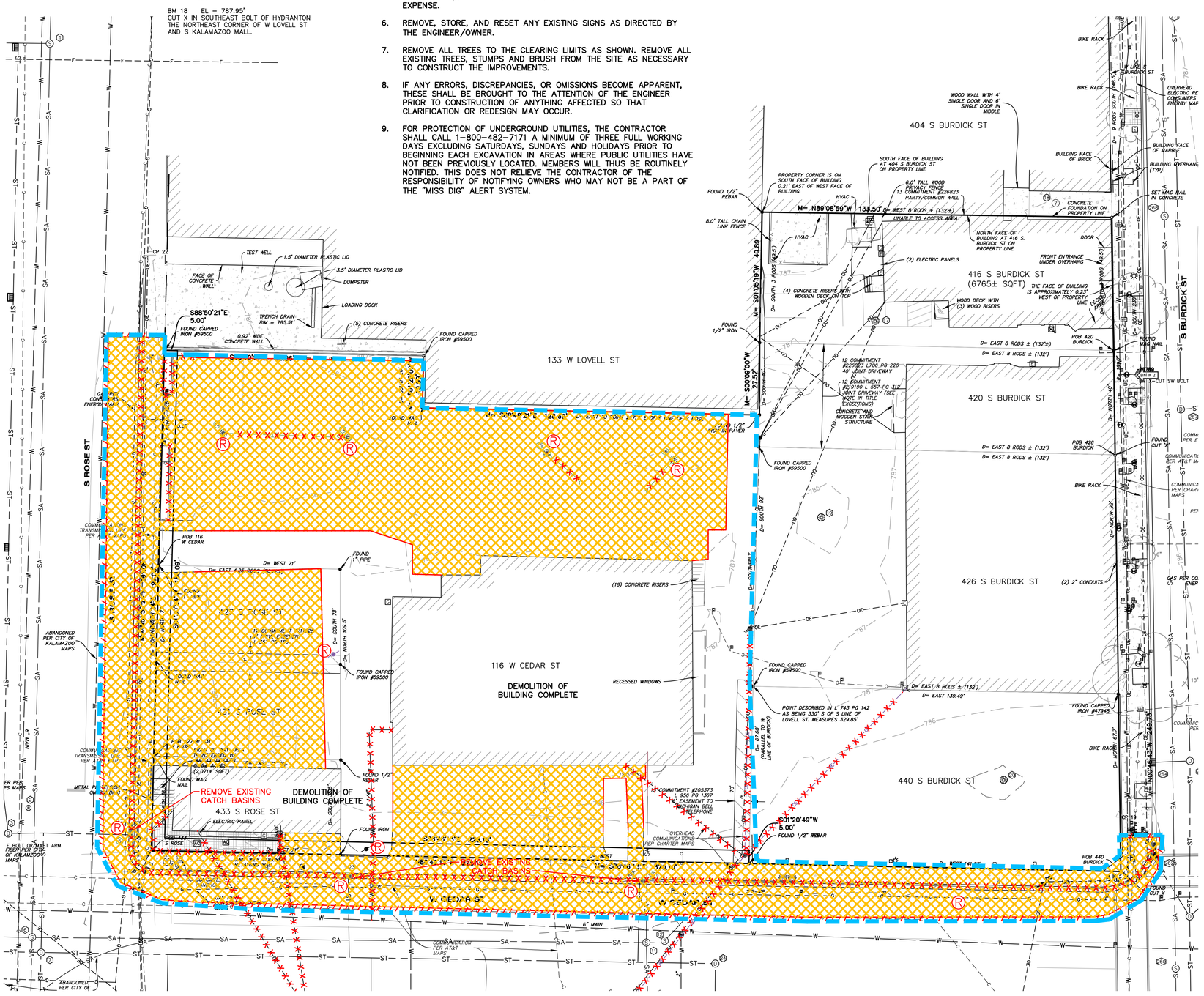
BM 3 EL = 785.98'
CUT X ON EAST BOLT OF MAST ARM ON THE NORTHWEST CORNER OF S ROSE ST AND W CEDAR ST INTERSECTION.

BM 17 EL = 787.24'
CUT X ON SOUTHEAST BOLT OF HYDRANT ON THE EAST SIDE OF S BURDICK ST ACROSS FROM W CEDAR ST.

BM 18 EL = 787.95'
CUT X IN SOUTHEAST BOLT OF HYDRANTON THE NORTHEAST CORNER OF W LOVELL ST AND S KALAMAZOO MALL.

REMOVAL NOTES

1. REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
2. SAWCUT ALL CURB, SIDEWALK, AND PAVEMENTS PRIOR TO REMOVAL. ADDITIONAL SAWCUT MAY BE NECESSARY PRIOR TO REPLACEMENT TO ENSURE CLEAN EDGE.
3. ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
4. COMPLY WITH ALL ASPECTS OF THE SOIL EROSION CONTROL PERMIT AS ISSUED BY THE KALAMAZOO COUNTY DRAIN COMMISSION. ALL TEMPORARY CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION.
5. ALL REMOVALS SHALL BE TO THE LIMITS INDICATED ABOVE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
6. REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
7. REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.
8. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
9. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.



0 10 20 40
1 inch = 20ft.

EXISTING STRUCTURE DATA

① 4.0' CONCRETE SAN MH
RIM = 786.43'
INV. S PLUGGED
INV. 2" E WATER VALVE = 781.93'±
INV. 8" W CLAY = 779.88'
SEDIMENT = 779.88'

② 2.0' WATER MH
RIM = 784.95'
TOP BOLT VALVE = 782.50'±
SEDIMENT = 781.65'

③ 6.0' CONCRETE STM MH
RIM = 785.28'
INV. 12" NW SLCPP = 780.13'
OFFSET, NO OTHER PIPES VISIBLE
WATER = 779.63'
SUMP = 777.78'

④ 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.75'
INV. 12" S CONCRETE = 782.75'
SEDIMENT = 782.75'

⑤ 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.74'
INV. 8" VERTICAL PIPE W
INV. 12" N CONCRETE = 782.74'

⑥ 4.0' BRICK SAN MH
RIM = 784.81'
INV. 8" N CLAY = 775.76'
INV. 8" S CLAY = 775.66'
INV. 8" E CLAY = 776.01'
INV. 8" W PVC = 775.86'

⑦ 4.0' BRICK STM MH
RIM = 784.86'
INV. 12" N CLAY = 778.26'
INV. 12" S IRON = 778.21'
INV. 12" E CLAY = 778.26'
INV. 10" W CLAY = 778.26'
SEDIMENT = 778.21'

⑧ 4.0' BRICK SAN MH
RIM = 784.48'
INV. 12"± N CLAY = 775.53'
INV. 12"± S CLAY = 775.43'

⑨ 4.0' BRICK CONCRETE STM MH
RIM = 783.62'
INV. 15" N CLAY = 777.47'
INV. 15" S CLAY = 777.37'
INV. 12" E CLAY = 777.37'±
SEDIMENT = 777.57'

⑩ TRAFFIC SIGNAL MH
RIM = 784.98'

⑪ 4.0' BRICK SAN MH
RIM = 785.11'
INV. 8" E CLAY = 777.81'
INV. 8" W CLAY = 777.56'
INV. 8" N CLAY = 778.46'
INV. 8" S CLAY = 777.91'

⑫ 4.0' CONCRETE SAN CB
RIM = 785.13'
INV. 8" NE CLAY FULL OF SEDIMENT = 787.13'±
SEDIMENT = 778.13'

⑬ 2.0' CONCRETE STM CB
RIM = 785.21'
INV. 4" E CLAY = 783.61'
SEDIMENT = 783.21'

⑭ 2.0' CONCRETE STM CB
RIM = 785.48'
INV. 4" W CLAY = 783.98'
SEDIMENT = 783.48'

⑮ 2.0' CONCRETE STM CB
RIM = 785.98'
INV. 4" SE CLAY = 784.58'
SEDIMENT = 782.78'

⑯ 2.0' CONCRETE STM CB
RIM = 785.65'
INV. 4" SE CLAY = 784.20'
WATER = 783.45'
SEDIMENT = 782.90'

⑰ 4.0' CONCRETE STM LB
RIM = 785.94'
NO PIPES VISIBLE
SEDIMENT = 781.34'

⑱ UNKNOWN MH (UNABLE TO OPEN)
RIM = 786.98'

⑲ 4.0' CONCRETE STM LB
RIM = 785.58'
NO PIPES VISIBLE
SUMP = 779.23'

⑳ 2.0' STM CB
RIM = 784.62'
NO PIPES VISIBLE
WATER = 783.72'
SEDIMENT = 783.62'

㉑ 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.44'
INV. 12" W CONCRETE = 782.14'
SEDIMENT = 782.14'

㉒ 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.50'
INV. 12" E CONCRETE = 782.10'
INV. 8" VERTICAL PIPE S = 780.40'±

㉓ 2.0' BLOCK STM CB
RIM = 784.34'
INV. 8" VERTICAL PIPE S = 779.54'
NO OTHER PIPES VISIBLE

㉔ 4.0' BLOCK STM MH
RIM = 785.11
INV. 15" W CLAY = 779.91'±
INV. 12" S CLAY = 780.01'
PIPES FULL OF SEDIMENT
SEDIMENT = 780.01'

㉕ 4.0' BLOCK STM MH
RIM = 784.04'
INV. 12" N IRON = 780.54'
INV. 12" S CLAY = 780.44'
INV. 12" E CONCRETE = 779.09'
INV. 6" SW CLAY = 779.34'
SEDIMENT = 779.09'

㉖ 4.0' BLOCK SAN MH
RIM = 784.23
INV. 8" N PVC = 777.43'
INV. 6" S CLAY = 776.88'±
INV. 8" E PVC = 776.58'
INV. 8" W PVC = 776.68'

(259) BELL SYSTEMS COMMUNICATION MH
RIM = 785.47'

(260) 4.0' BRICK SAN MH
RIM = 785.49'
INV 8" N PVC 775.94'
INV 8" S PVC 775.89'

(261) 4.0' BRICK STM MH
RIM = 785.62'
INV 12" NW CLAY = 778.27'
INV 15" N CLAY = 778.02'
INV 12" NE CLAY = 778.02'
INV 12" W CLAY = 778.42' ±
INV 15" S CLAY = 778.02'
INV 12" SW CLAY = 778.12'
SUMP = 778.02'

(262) STM CB
RIM = 784.85
INV 4" NW PVC = 782.65'
VERTICAL CLAY = 780.00'±
SE

(263) 2.0' BLOCK STM CB
RIM = 785.17'
INV 8" N PVC = 781.47'
INV 12" SW CLAY = 779.32'
SUMP = 779.32'

(264) 2.0' CONCRETE STM CB
RIM = 785.27'
INV 10" E PVC = 781.32'
WATER = 781.27'
SUMP = 780.97'

(265) 2.0' CONCRETE STM CB
RIM = 785.38'
INV 8" S PVC 782.78'
WATER = 782.73
SUMP = 782.68

(266) 4.0' CONCRETE STM MH
RIM = 785.74'
INV 15" N CLAY = 778.49'
INV 15" S CLAY = 778.59'
INV 12" W CLAY = 780.99 ±

(267) 4.0' CONCRETE STM MH
RIM = 786.40'
INV 15" N CLAY = 779.55'
INV 15" S CLAY = 779.50'
INV 12" E CLAY = 779.65'
SUMP = 779.50'

(268) 4.0' BRICK SAN MH
RIM = 786.61'
INV 4" W CLAY = 778.71'
INV 6" W CLAY = 778.81'
INV 10" N CLAY 778.01'
INV 10" S CLAY = 778.11
CHANNEL = 778.06'

(269) 1.0' NYLOPLAST STM YD
RIM = 787.27'
INV 12" N PVC = 783.52'
INV 12" S PVC = 783.52
WATER = 783.52'
SUMP 783.12'

(270) CONSUMERS ENERGY ELECTRIC MH
RIM = 786.93'

(271) 4.0' BRICK STM MH
RIM = 786.94'
INV 10" E CLAY = 782.64'
INV 6" S CLAY = 783.34' ±
SEDIMENT = 780.64'

(272) 6.0' CONCRETE STM LB
RIM = 787.44'
INV 12" E SLCPP = 782.94'
INV 12" S SLCPP = 782.64'
INV 8" W SLCPP = 784.14'
INV 8" W SLCPP = 784.14'
SUMP = 782.14'

(273) 4.0' CONCRETE STM MH
RIM = 787.07'
INV 15" N CLAY = 780.32'
INV 15" S CLAY = 780.32'
SEDIMENT = 780.32'

REMOVALS LEGEND

-x-x-x-x-	CURB REMOVAL
———	SAWCUT
▨	PAVEMENT/SIDEWALK REMOVAL
-x-x-x-x-	UTILITY LINE REMOVAL
▨	TREE REMOVAL
Ⓡ	REMOVE
Ⓟ	PROTECT
Ⓢ	SALVAGE
— — —	LIMITS OF CONSTRUCTION

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FIELD WORK PERFORMED BY:
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H:\23-141D (Project Stardust)__FINAL DRAWINGS\CD 100 site demolition.dwg LAST SAVED BY: LDIEHL ON 6/3/2026

hurley & stewart
2800 s. 11th street
kalamazoo, michigan 49009

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401 hall st. sw, ste. 213
grand rapids, michigan 49503

REVISIONS:

ISSUED FOR:

1	COK CHECKLIST APPLICATION	4/16/26
2	OWNER REVIEW	5/7/26
	CITY OF KALAMAZOO SITE PLAN SUBMITTAL	6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

Sheet Title: SITE DEMOLITION
Project: WEST CEDAR APARTMENTS
Client: 116 WEST CEDAR, LLC

6/3/26
Sheet
CD 100

LEGEND

- STANDARD–DUTY BITUMINOUS PAVEMENT
- HEAVY–DUTY BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT AND SIDEWALK
- HEAVY–DUTY CONCRETE PAVEMENT
- PROPOSED BUILDING
- PARKING STRIPING (BLUE)
- PARKING STRIPING (WHITE)
- PARKING STRIPING (YELLOW)
- CURB AND GUTTER

SITE LEGEND

- (HMA) HMA PAVEMENT
- (IC) INTEGRAL CURB WALK
- (CW) CONCRETE WALK
- (CS) CONCRETE SURFACE
- (HC) HEAVY DUTY CONCRETE
- (PS) PARKING STRIPING (9'x18')
- (DE) DUMPSTER ENCLOSURE
- (E2) E2 CURB TYPE
- (C2) C2 CURB TYPE
- (C4) C4 CURB TYPE
- (RR) TYPE R RAMP
- (FR) TYPE F RAMP
- (PR) TYPE P RAMP

ZONING REQUIREMENTS

ZONING
THE SITE IS ZONED D2 (DOWNTOWN 2) FLEX LOT TYPE
SETBACKS: FRONT – 0–10'
SIDES – 0'
REAR – 0'

PROPOSED USE
FACILITY USE APARTMENTS
CONSTRUCTION TYPE 5A

PARKING
TOTAL PARKING SPACES ALLOWED:
2 SPACES PER DWELLING UNIT 142 ALLOWED (71 DWELLING UNITS)

TOTAL PARKING PROVIDED = 41 SPACES
BARRIER FREE SPACES REQUIRED = 2
BARRIER FREE SPACES = 3 PROVIDED
ALL BARRIER FREE SPACES DESIGNED PER ADA REQUIREMENTS

TYPICAL PARKING SPACE DIMENSION = 9'X18'

BICYCLE PARKING 1 SPACE PER 5 DWELLING UNIT
(71 UNITS REQUIRE 15 SPACES 32 SPACES PROVIDED IN STORAGE BUILDING)

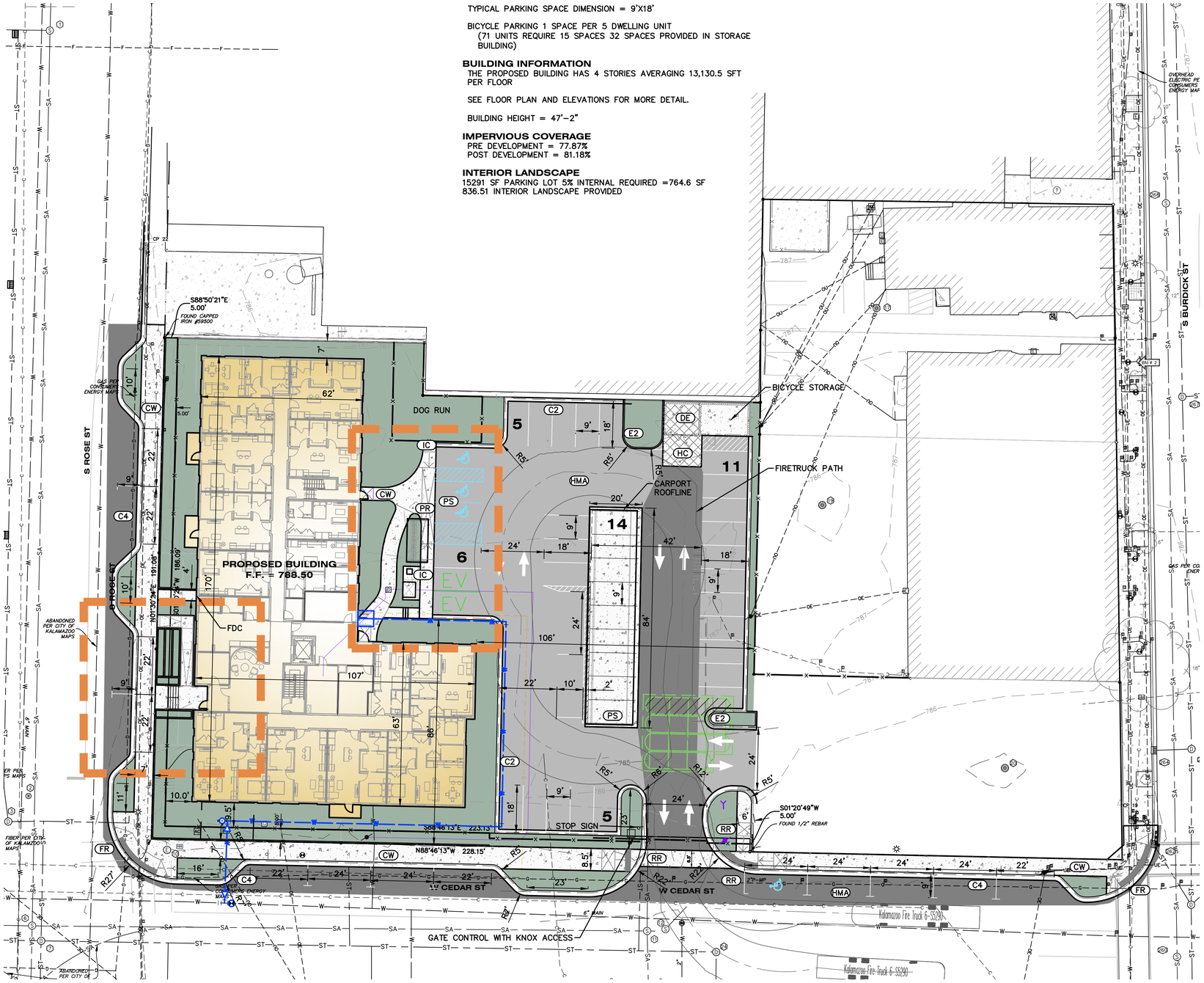
BUILDING INFORMATION
THE PROPOSED BUILDING HAS 4 STORIES AVERAGING 13,130.5 SFT PER FLOOR

SEE FLOOR PLAN AND ELEVATIONS FOR MORE DETAIL.

BUILDING HEIGHT = 47'–2"

IMPERVIOUS COVERAGE
PRE DEVELOPMENT = 77.87%
POST DEVELOPMENT = 81.18%

INTERIOR LANDSCAPE
15291 SF PARKING LOT 5% INTERNAL REQUIRED =764.6 SF
836.51 INTERIOR LANDSCAPE PROVIDED



0 10 20 40
1 inch = 20ft.

N W E S

GENERAL NOTES

1. ALL DIMENSIONS SHOWN ARE TO THE EDGE OF METAL.
2. PROVIDE CURB CUTS/RAMPS AT ALL BARRIER FREE ACCESS POINTS.
3. PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND MICHIGAN BARRIER FREE CODE.
4. SEE ARCHITECTURAL PLANS FOR MORE DETAILS ON WALLS, STAIRS, AND RAMPS.
5. MATCH EXISTING CURB & GUTTER SECTIONS WHEN CONNECTING TO THEM. CONDITIONS VARY THROUGHOUT PROJECT.
6. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AND CITY OF KALAMAZOO STANDARDS SPECIFICATIONS.
7. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.
8. ALL EXTERIOR CONCRETE SHALL BE MDOT GRADE P1 (3500PSI), AIR ENTRAINED, LIMESTONE AGGREGATE, BROOM FINISHED, CURING SEAL.
9. THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
10. ALL REQUIRED FILL FOR THIS PROJECT SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER OR CLASS II GRANULAR MATERIAL FROM BORROW AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
11. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL 1–800–482–7171 A MINIMUM OF THREE FULL WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
12. ANY BITUMINOUS OR CONCRETE PAVEMENT, SANITARY SEWER, SANITARY SEWER SERVICE LEADS, OR STORM SEWER, WHICH IS DAMAGED BY THE CONTRACTOR DURING HIS OPERATIONS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AND AT THE CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
14. ALL UNSUITABLE SUBBASE MATERIAL MUST BE REMOVED TO A MINIMUM DEPTH OF 24" BELOW THE TOP OF THE SUBGRADE OR AS DETERMINED BY THE COUNTY ENGINEER.
15. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.

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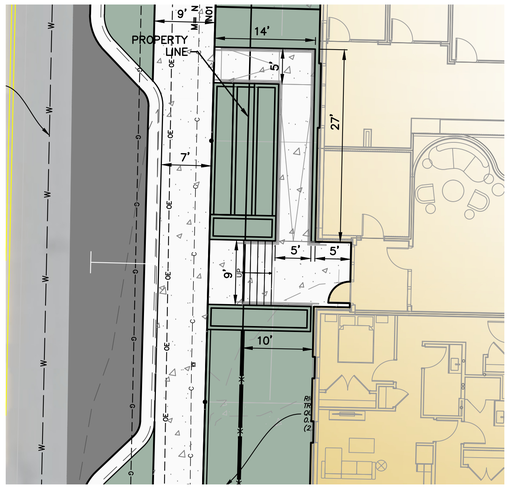
CITY OF KALAMAZOO SITE PLAN SUBMITTAL 6/3/26

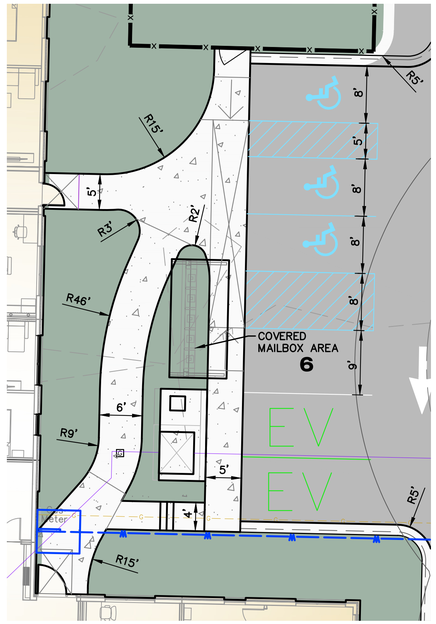
Job No: 23-141D • PM: – • Designer: – • QA/QC: 3/5/26

SITE LAYOUT PLAN
WEST CEDAR APARTMENTS
116 WEST CEDAR, LLC

Sheet Title:
Project:
Client:

6/3/26
Sheet
C 100





0 5 10 20
1 inch = 10ft.

N
W E
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TRAFFIC STRIPING DIAGRAM

SCALE: 1"=30'

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REVISIONS:

ISSUED FOR:
1 COK CHECKLIST APPLICATION 4/16/26
2 OWNER REVIEW 5/7/26
CITY OF KALAMAZOO SITE PLAN SUBMITTAL 6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

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FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC

H:\23-141D (Project Stardust)__FINAL DRAWINGS\c 101 Site Elargement Plan.dwg LAST SAVED BY: LDIEHL ON 5/13/2026

SITE ELARGEMENT PLAN
WEST CEDAR APARTMENTS
116 WEST CEDAR, LLC

Sheet Title:
Project:
Client:

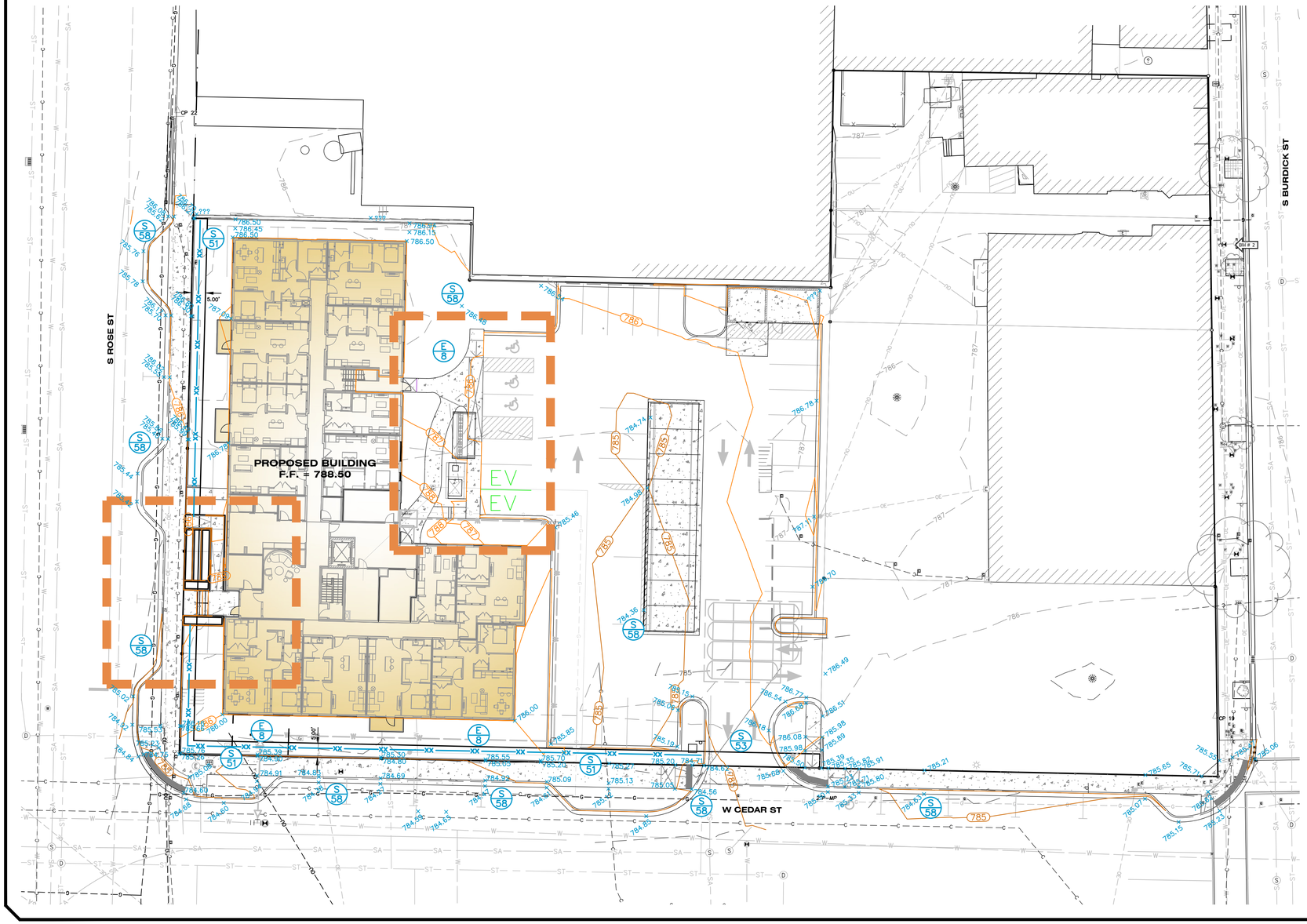
6/3/26
Sheet
C 101

GRADING PLAN LEGEND

- PROPOSED CONTOUR 5–FT (720)
- PROPOSED CONTOUR NORMAL (719)
- EXISTING CONTOUR 5–FT (720)
- EXISTING CONTOUR NORMAL (719)
- PROPOSED SPOT GRADE (×896.32)
- PROPOSED SPOT GRADES: TOP AND BOTTOM OF WALL (×894.76 TOP, ×894.26 BTM)
- EXISTING SPOT GRADE (×895.25)
- PROPOSED SURFACE SLOPE (1:4, 25%)
- PROPOSED SILT FENCE (XX)
- PROPOSED GRADED SWALE
- SOIL BORING (SB)
- BENCH MARK (BM # XX)
- SOIL EROSION MEASURE (E XX)
- SEDIMENT CONTROL MEASURE (S XX)

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E8	*PERMANENT SEEDING*		*Stabilization method utilized on sites where earth change has been completed (final grading attained).*
S51	*SILT FENCE*		*Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.*
S53	*STABILIZED CONSTRUCTION ACCESS*		*Used at every point where construction traffic enters or leaves a construction site.*
S58	*INLET PROTECTION FABRIC DROP*		*Use at stormwater inlets, especially at construction sites.*



0 10 20 40
1 inch = 20ft.

N W E S

GRADING & SESC NOTES

1. ALL WORK WILL COMPLY WITH THE PROVISIONS OF THE SOIL EROSION AND SEDIMENTATION CONTROL ACT (PA 451, PART 91 OF 1994 AS AMENDED) ADMINISTERED BY KALAMAZOO COUNTY.
2. FOR INSTALLATION SPECIFICATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES, REFER TO THE STATE OF MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET (DTMB) SESC MANUAL.
3. AVOID UNNECESSARY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE AREAS ACT AS SEDIMENT FILTERS.
4. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEANUP AND APPROVAL.
5. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION.
6. ALL SOIL PILES SHALL BE SURROUNDED BY SILT FENCE IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 7 DAYS. TOPSOIL PILES SHALL BE SEEDED IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 20 DAYS. SPOIL PILES SHALL NOT BE PLACED WITHIN 50' FROM ANY TEMPORARY OR PERMANENT WATERCOURSE.
7. THE CONTRACTOR SHALL COMPLY WITH THE WEEKLY RECOMMENDATIONS OF THE CERTIFIED STORM WATER OPERATOR.
8. PROVIDE SILT SACKS IN EACH CATCH BASIN UNTIL SITE IS STABILIZED.
9. SEE LANDSCAPING PLAN FOR FINAL SLOPE TREATMENTS.
10. PLACE TOPSOIL AND SEED ACCORDING TO THE LANDSCAPE PLANS AS SOON AS AREAS ARE BROUGHT TO GRADE.
11. WATER SITE WHEN NECESSARY TO PREVENT AIR BORNE SEDIMENT TRANSFER.
12. ALL EXCAVATION AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT, _____ PROJECT NO. _____ ISSUED MM/DD/YYYY.
13. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
14. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
15. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
16. REMOVE AND REPLACE WITH CONTROLLED FILL ANY AREAS THAT HAVE BEEN SOFTENED BY RAINS, FREEZING, CONSTRUCTION EQUIPMENT, ETC.
17. ALL REQUIRED FILL FOR THIS PROJECT SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER OR CLASS II GRANULAR MATERIAL FROM BORROW AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
18. ALL GRANULAR FILL UNDER THE INFLUENCE OF THE ROADWAY AND PROCESSED ROAD GRAVEL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
19. ALL COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN 12" LOOSE LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO AT LEAST THE SPECIFIED MINIMUM DRY DENSITY. FIELD DENSITY TESTS SHOULD BE PERFORMED ON EACH LIFT AS NECESSARY TO ENSURE THAT ADEQUATE MOISTURE CONDITIONS AND COMPACTION ARE BEING ACHIEVED.
20. SITE CONTRACTOR SHALL REMOVE AND STOCKPILE ALL TOPSOIL AND BLACK ORGANIC SOILS ON–SITE TO BE USED IN THE REGRADING OF LANDSCAPE AREAS. THIS MATERIAL IS NOT TO BE USED FOR FILL OR PAVEMENT SUBBASE. REMOVAL OF ANY EXCESS SOIL OFF–SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
21. CONTRACTOR RESPONSIBLE FOR VERIFYING EARTHWORK CALCULATIONS PRIOR TO COMMENCING WORK. NO EXTRA EARTHWORK WILL BE PAID FOR ONCE EARTHWORK HAS BEGUN. ANY DISCREPANCIES WITH THE EARTHWORK CALCULATIONS SHALL BE REVIEWED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
22. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. SCRAPE ROAD AT THE END OF EACH WORKDAY AND SWEEP AT LEAST ONCE A WEEK.
23. ANY DISTURBED AREA THAT WILL BE LEFT UNWORKED 5 DAYS OR LONGER MUST BE SEEDED AND MULCHED OR SODDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
24. ROAD RIGHTS–OF–WAY MUST BE STABILIZED WITH SEED AND MULCH WITHIN 5 DAYS OF COMPLETING UTILITY WORK IN THE RIGHT–OF–WAY.
25. AREAS OF EARTH CHANGE THAT ARE DISTURBED BEYOND THE FALL SEEDING DEADLINE (NOV. 1) MUST BE TEMPORARILY STABILIZED WITH A MINIMUM OF STRAW MULCH SECURELY CRIMPED TO THE GROUND.
26. ACCUMULATED SEDIMENT TO BE REMOVED FROM STORM SYSTEM UPON COMPLETION OF CONSTRUCTION. ALL TEMPORARY CONTROLS TO BE REMOVED AFTER SITE IS STABILIZED AND VEGETATION ESTABLISHED.
27. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
28. ONLY EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN BIONET S150BN AND WESTERN WOOD FIBERS EXCEL SS–2 ALL NATURAL (BIODEGRADABLE JUTE/SCRIM NETTING WITH LENO WEAVE TYPE MESH) OR EQUIVALENT ARE CONSIDERED ACCEPTABLE PRODUCTS. NET EROSION BLANKETS CONTAINING PLASTIC OR SYNTHETIC NET OR NETTING SHALL NO LONGER BE AUTHORIZED, NOR APPROVED FOR USE.

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FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC

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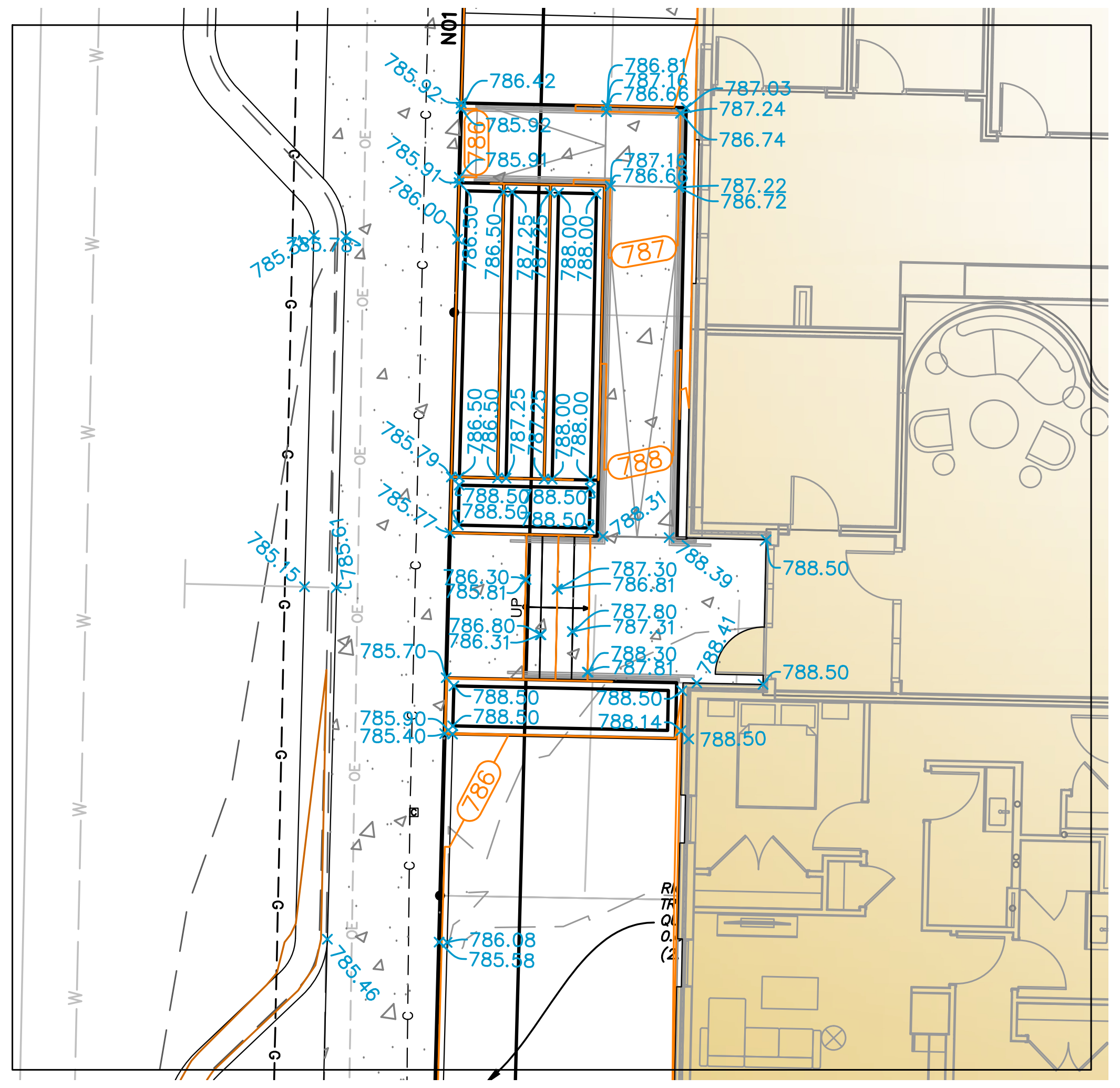
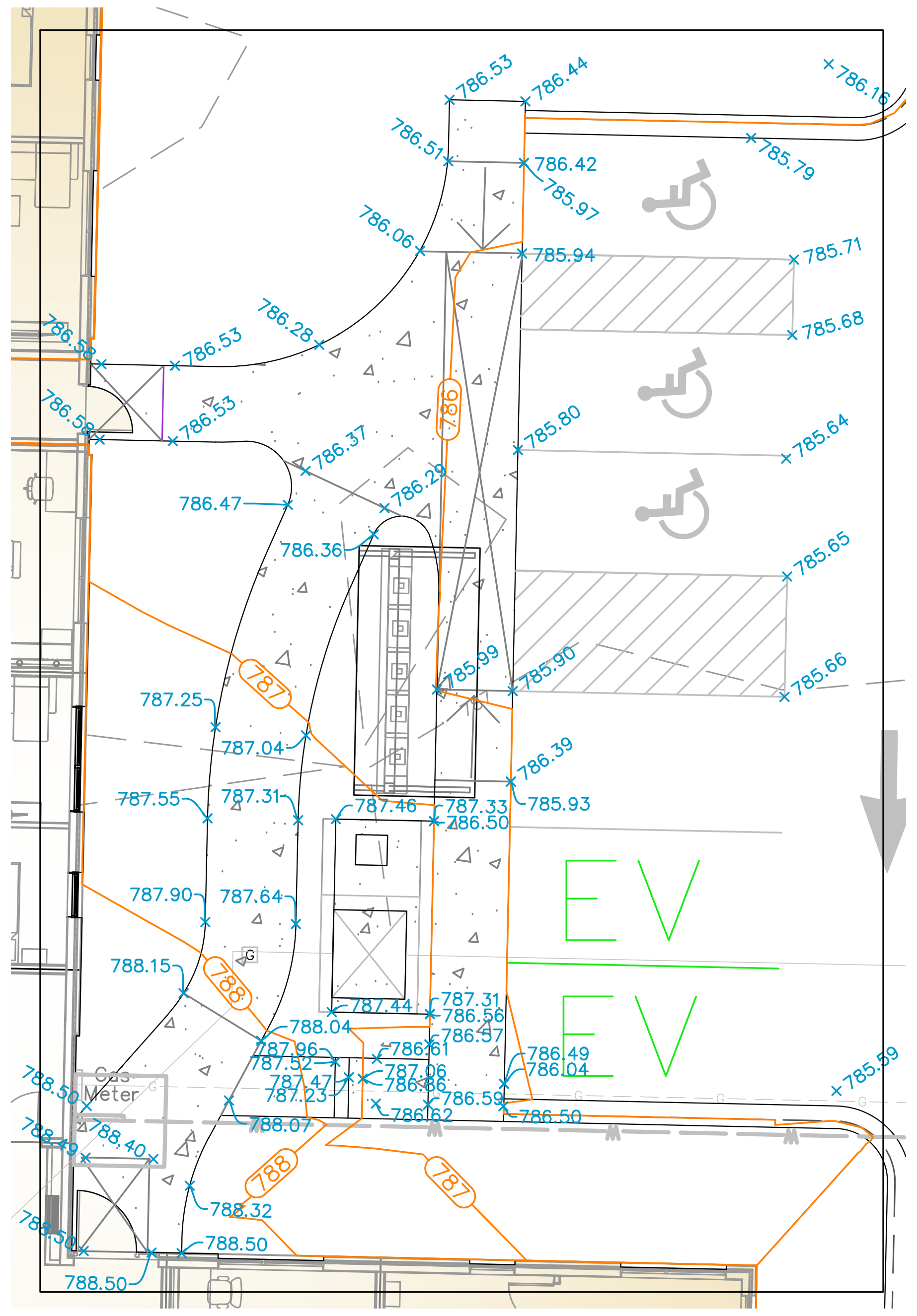
Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

GRADING PLAN SESC
WEST CEDAR APARTMENTS
116 WEST CEDAR, LLC

Sheet Title:
Project:
Client:

6/3/26
Sheet
C 200





GRADING PLAN LEGEND

720	PROPOSED CONTOUR 5–FT
719	PROPOSED CONTOUR NORMAL
720	EXISTING CONTOUR 5–FT
719	EXISTING CONTOUR NORMAL
× 896.32	PROPOSED SPOT GRADE
× 894.76 TOP 894.26 BTM	PROPOSED SPOT GRADES: TOP AND BOTTOM OF WALL
× 895.25	EXISTING SPOT GRADE
1:4 ← 25% ←	PROPOSED SURFACE SLOPE
—XX—	PROPOSED SILT FENCE
→→→	PROPOSED GRADED SWALE
⌖SB	SOIL BORING
BM #XX	BENCH MARK
E XX	SOIL EROSION MEASURE
S XX	SEDIMENT CONTROL MEASURE

0 5 10 20
1 inch = 10ft.

N
W E
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Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

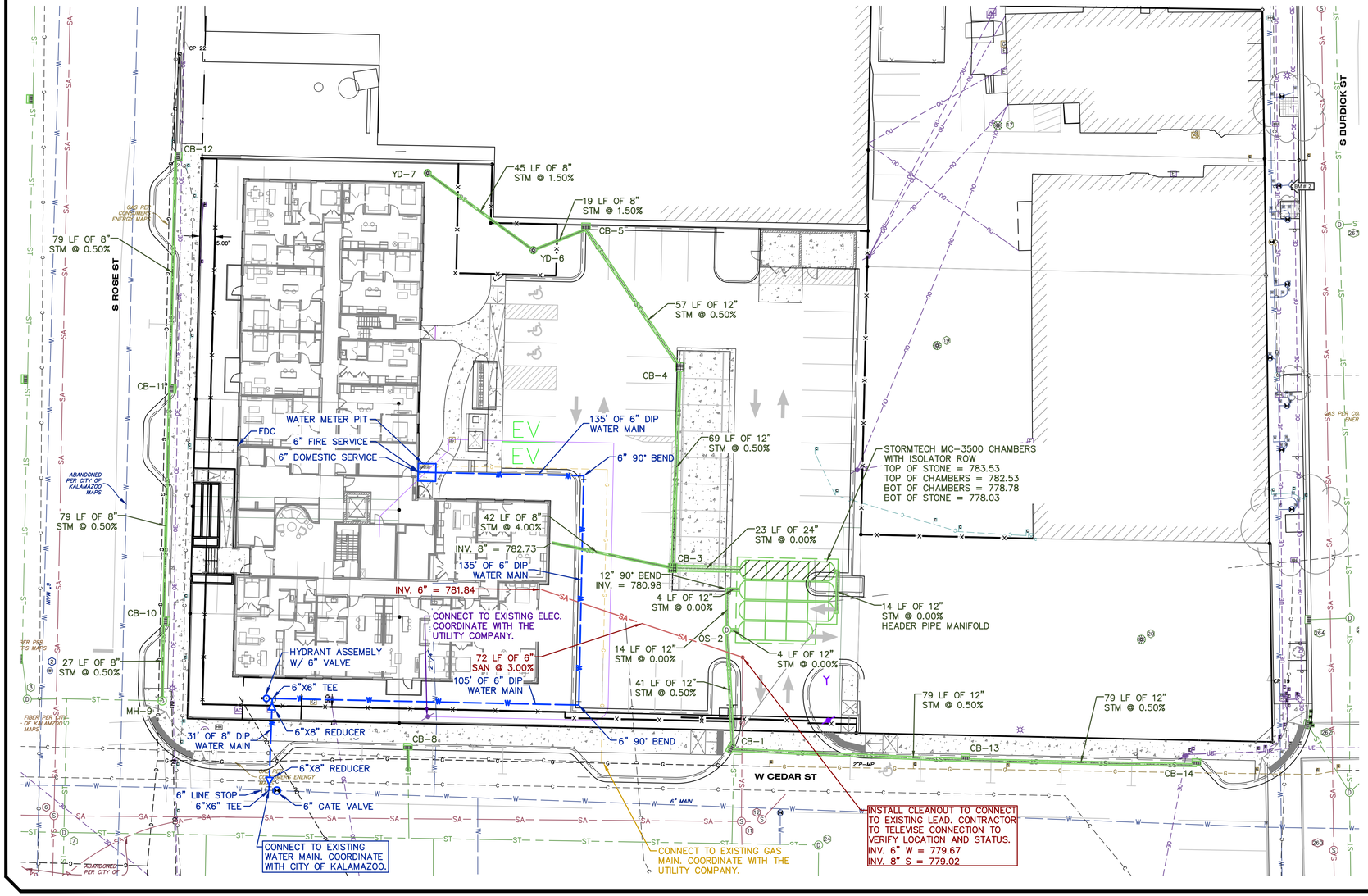
Sheet Title: **GRADING PLAN ENLARGEMENT**
Project: **WEST CEDAR APARTMENTS**
Client: **116 WEST CEDAR, LLC**

6/3/26
Sheet
C 201

STORM SEWER STRUCTURE SCHEDULE

STR. #	RIM EL.	DIAM.	CASTING	PIPES IN:	PIPES OUT
$$ CB-1	784.51	48"	7045 M1	12" N: 780.90 12" E: 780.90	*12" S: 780.40
$ CB-3	784.36	48"	5105 M3	12" N: 780.00 8" W: 781.05	24" E: 778.95
CB-4	784.74	48"	5105 M1	12" NW: 780.34	12" S: 780.34
CB-5	786.13	48"	7045 M1	8" W: 780.79	12" SE: 780.62
$$ CB-8	784.25	48"	7045 M1		*8" S: 779.54
CB-10	784.99	48"	7045 M1	8" N: 782.88	8" S: 782.88
CB-11	785.40	48"	7045 M1	8" N: 783.27	8" S: 783.27
CB-12	785.62	24"	7045 M1		8" S: 783.67
CB-13	784.63	48"	7045 M1	12" E: 781.30	12" W: 781.30
CB-14	785.07	24"	7045 M1		12" W: 781.69
$$ MH-9	785.36	48"	1040 B	8" N: 782.74	*12" W: 782.74
** OS-2	785.18	48"	1040 B	12" E: 780.98 12" N: 780.98	12" S: 781.10
YD-6	786.10	8"	8" GRATE	8" NW: 781.08	8" E: 781.08
YD-7	786.14	8"	8" DOME		8" SE: 781.74

* EXISTING PIPE
** OUTLET CONTROL STRUCTURE. INSTALL WEIR WALL TO 783.53
$ ADS BARRACUDA S4 TREATMENT DEVICE
$$ REMOVE EXISTING CATCH BASIN STRUCTURES AND CONNECT TO EXISTING OUTLET PIPE



0 10 20 40
1 inch = 20ft.

N W E S

UTILITY NOTES

1. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
2. ALL MATERIAL AND CONSTRUCTION WILL BE IN ACCORDANCE WITH THE MOST RECENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT). MDOT SPECIFICATIONS ARE SUBJECT TO THE CURRENT ADDENDA. IN ADDITION, ALL WORK WILL BE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE STANDARDS AND REGULATIONS.
3. PLACE SANITARY CLEANOUT EVERY 100' AND/OR AT BENDS ON ALL 6" SANITARY SEWER LEADS.
4. ALL BEDDING MATERIAL TYPES ARE TO BE PER MDOT SPEC. 402.03.
5. DEWATERING MAY BE REQUIRED TO INSTALL OR REMOVE SOME UTILITIES. REFER TO SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. REFER TO GEOTECHNICAL REPORT FOR MORE INFORMATION.
6. ALL STRUCTURE CASTINGS TO BE EAST JORDAN IRON WORKS OR APPROVED EQUAL. SEE STRUCTURE TABLE FOR SPECIFIC CASTING AT EACH STRUCTURE.
7. STORM SEWERS SHALL BE CONCRETE C76-III, SOLID WALL ADS N-12 RIGID PIPE MEETING AASHTO M-294, TYPE S, OR APPROVED EQUAL INSTALLED PER THE REQUIREMENTS OF MDOT AND CITY OF KALAMAZOO. MANDREL TESTING SHALL BE PERFORMED PRIOR TO PAVING. USE CONCRETE PIPE WHERE INDICATED.
8. VERIFY LOCATION AND ELEVATION OF EXISTING SANITARY LEAD PRIOR TO ORDERING STRUCTURES AND CONSTRUCTION.
9. ALL WATER MAIN INSTALLED IN GROUNDWATER SHALL BE WRAPPED WITH POLYETHYLENE.
10. PROVIDE 18" WATER MAIN SEPARATION WHEN CROSSING OTHER UTILITIES. DEFLECT UNDER OTHER UTILITIES W/O USING FITTINGS WHENEVER POSSIBLE. SEE WATER MAIN PROFILE SHEET.
11. VERIFY NUMBER OF FITTINGS PRIOR TO ORDERING. TOTALS DO NOT INCLUDE VERTICAL DEFLECTIONS THAT MAY BE NEEDED.
12. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
13. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR GROUNDWATER AND SOILS INFORMATION. ANY UTILITIES REQUIRING DEWATERING SHALL BE INSTALLED TO THE CITY OF KALAMAZOO STANDARDS AND INCLUDED IN THE INSTALLATION COSTS. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING NECESSARY TO CONSTRUCT UTILITIES IN THE DRY.
14. CONTRACTOR TO COORDINATE PRIVATE UTILITY CONNECTIONS WITH UTILITY COMPANIES.
15. SITE CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL UTILITIES TO 5' FROM BUILDING WALL.
16. COORDINATE ALL UTILITY LOCATIONS AND ELEVATIONS WITH MECHANICAL DRAWINGS AND BUILDING CONTRACTOR PRIOR TO INSTALLATION.
17. SANITARY SEWERS SHALL BE SDR-35. SANITARY SEWER MATERIALS AND INSTALLATION SHALL COMPLY WITH CITY OF KALAMAZOO REQUIREMENTS. COORDINATE WORK AND INSPECTIONS WITH CITY OF KALAMAZOO.
18. WATER SUPPLY MATERIALS AND INSTALLATION SHALL COMPLY WITH CITY OF KALAMAZOO UTILITIES REQUIREMENTS AND SPECIFICATIONS. COORDINATE CONNECTIONS WITH CITY OF KALAMAZOO.
19. SEE SITE ELECTRICAL PLAN FOR LOCATION OF ALL ELECTRICAL SLEEVES AND CONDUIT.
20. UNDERGROUND ELECTRICAL SHALL BE PROVIDED TO THE SITE LIGHT POLES.
21. REMOVE SEDIMENT FROM ALL STRUCTURES ONCE PAVING IS COMPLETE AND REMOVE SILT SACKS.
22. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.

PRELIMINARY
NOT FOR CONSTRUCTION

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SITE UTILITY PLAN
WEST CEDAR APARTMENTS
116 WEST CEDAR, LLC

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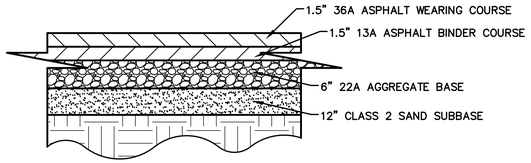
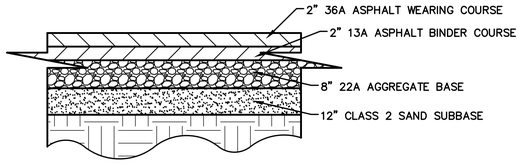


ALL MATERIALS COMPACTED IN PLACE ON PREPARED SUBGRADE

STANDARD DUTY ASPHALT DETAIL

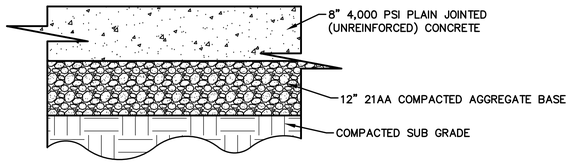
NOT TO SCALE



ALL MATERIALS COMPACTED IN PLACE ON PREPARED SUBGRADE

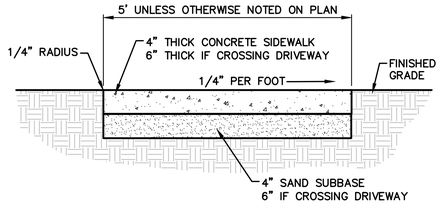
HEAVY DUTY ASPHALT DETAIL

NOT TO SCALE



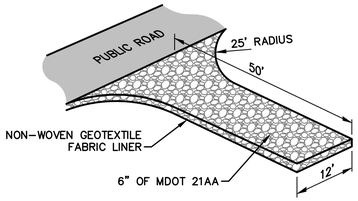
HEAVY DUTY CONCRETE DETAIL

NOT TO SCALE



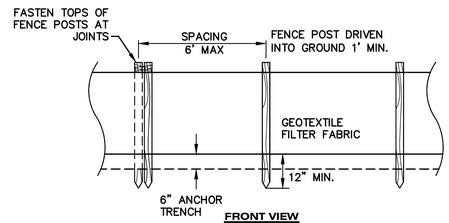
SIDEWALK DETAIL

NOT TO SCALE



S53 STABILIZED CONSTRUCTION ACCESS

NOT TO SCALE



S51 SILT FENCE DETAIL

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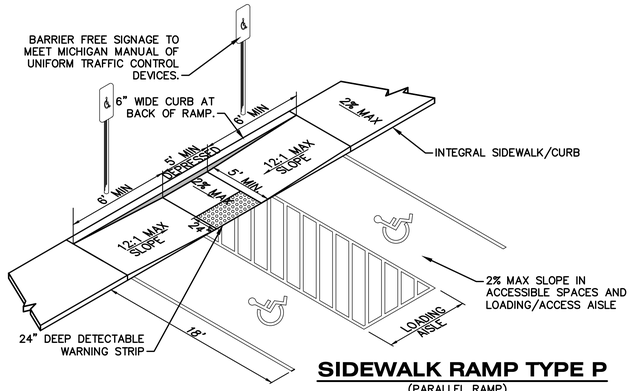
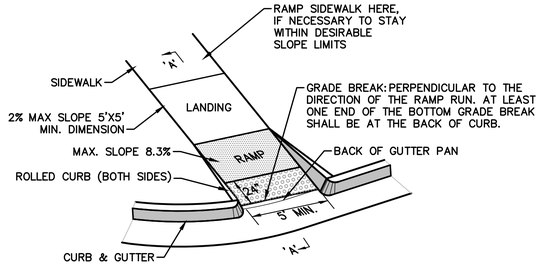


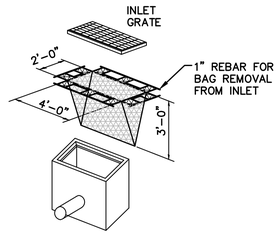
SIDEWALK RAMP TYPE P

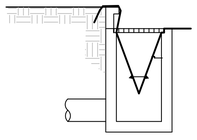
(PARALLEL RAMP)
NOT TO SCALE



SIDEWALK RAMP TYPE R

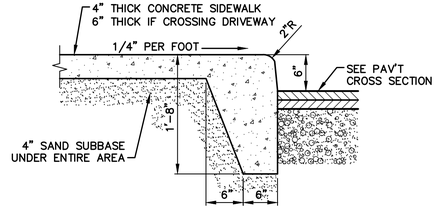
(ROLLED SIDES)
NOT TO SCALE





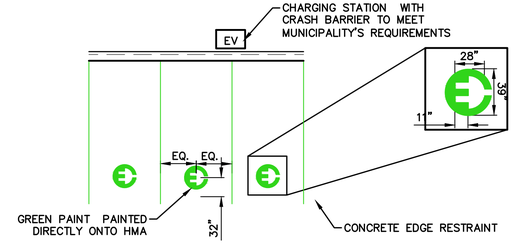
S58 INLET PROTECTION FABRIC DROP

NOT TO SCALE



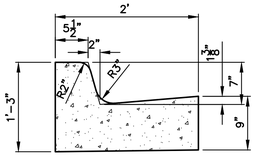
INTEGRAL SIDEWALK/CURB

NOT TO SCALE



ELECTRIC VEHICLE PARKING BAYS

NOT TO SCALE



"C4" CURB DETAIL

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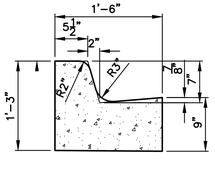

"C2" CURB DETAIL

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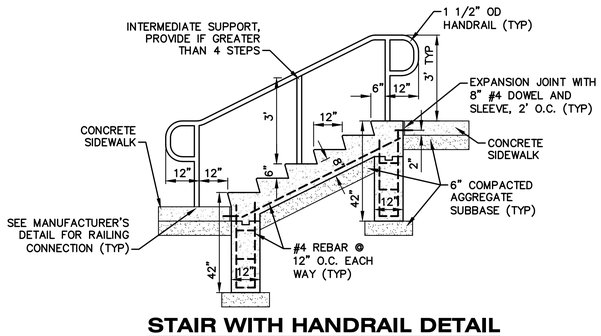

STAIR WITH HANDRAIL DETAIL

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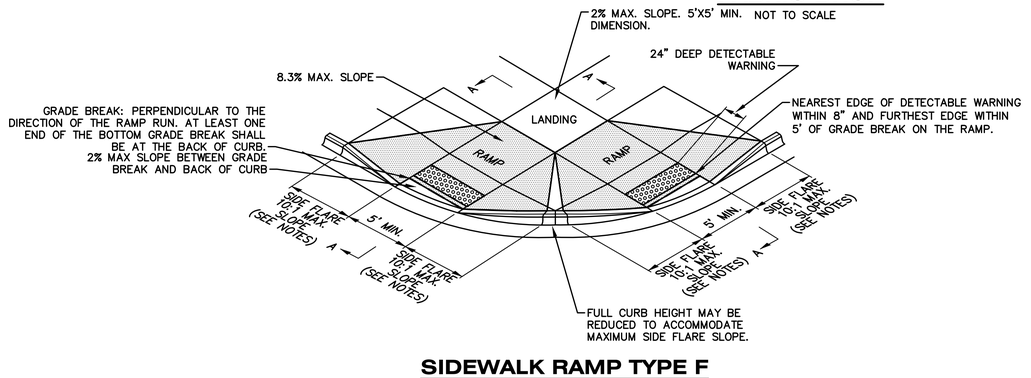

SIDEWALK RAMP TYPE F

(FLARED SIDES, TWO RAMPS ARE SHOWN)
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hurley & stewart, llc
main: 269.552.4960
fax: 269.552.4961
www.hurleystewart.com
hurley & stewart
2800 s. 11th street
kalamazoo, michigan 49009
401 hall st. sw, ste. 213
grand rapids, michigan 49503

REVISIONS:

ISSUED FOR:

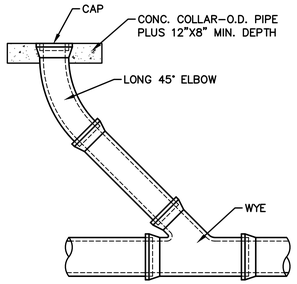
1	COK CHECKLIST APPLICATION	4/16/26
2	OWNER REVIEW	5/7/26
	CITY OF KALAMAZOO SITE PLAN SUBMITTAL	6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

Sheet Title: SITE DETAILS
Project: WEST CEDAR APARTMENTS
Client: 116 WEST CEDAR, LLC

6/3/26

Sheet C 400



CLEANOUT DETAIL

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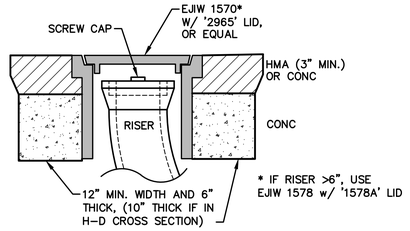
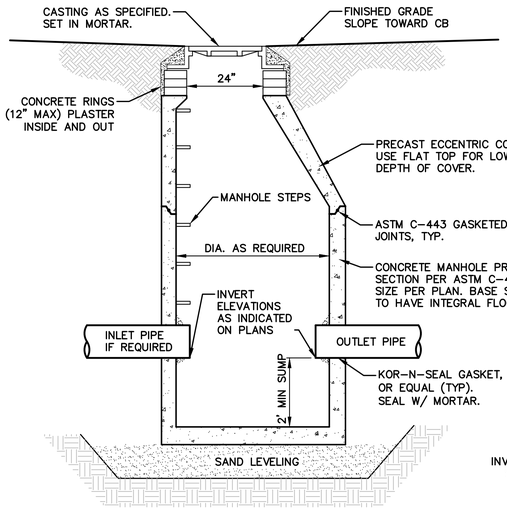


CLEANOUT IN PAVEMENT/CONC AREA

NOT TO SCALE



CATCH BASIN DETAIL

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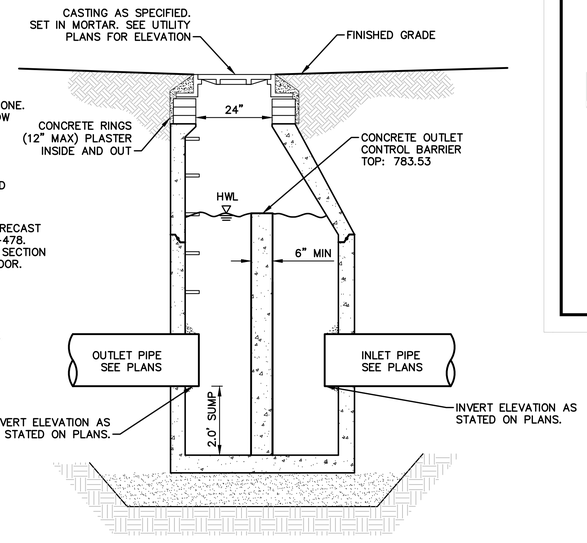
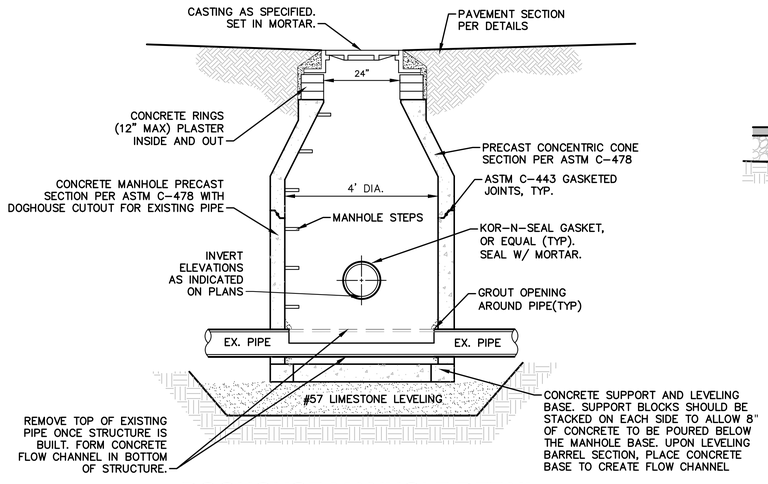


OUTLET CONTROL STRUCTURE OS-2

NOT TO SCALE



DOGHOUSE MANHOLE DETAIL

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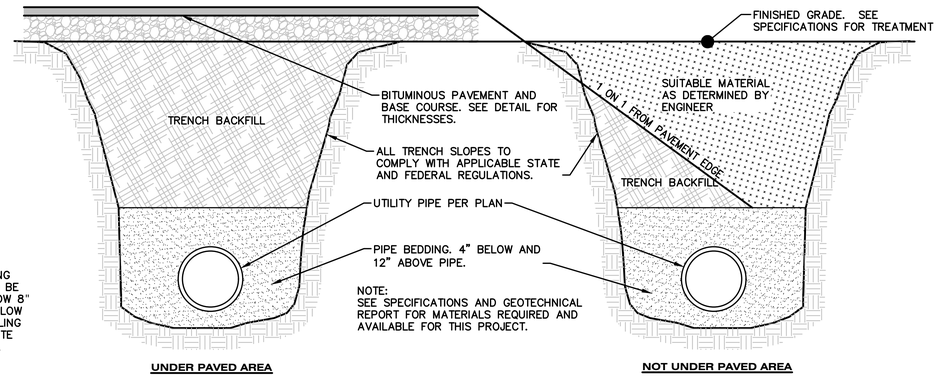
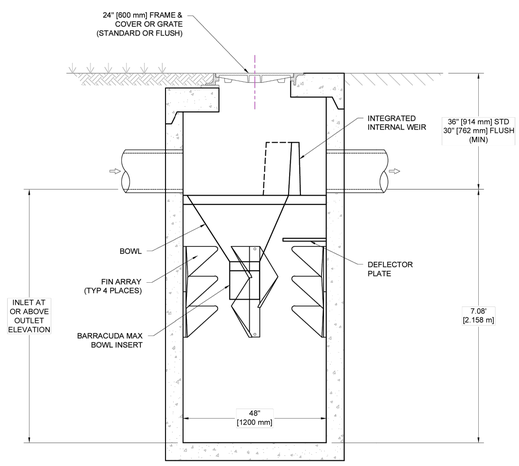


TRENCH DETAILS

NOT TO SCALE

PRODUCT SPECIFICATIONS

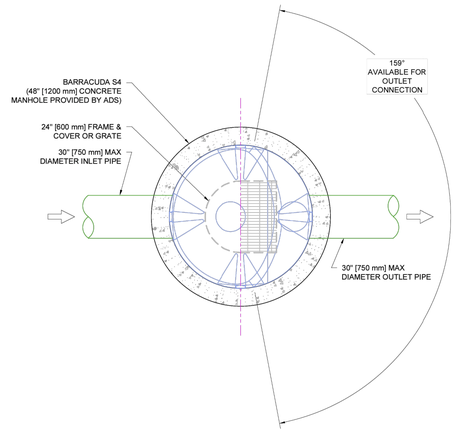
- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
  -OR-
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d_{50}=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
  -OR-
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER PREVIOUS 2013 NJDEP/NJCAT HDS PROTOCOL.



SECTION VIEW A-A

NOT TO SCALE

BARRACUDA MAX S4		
	CFS	L/s
NJDEP (50% Removal)	1.52	43.0
OK-110 (80% Removal)	1.52	43.0



PLAN VIEW

NOT TO SCALE

NOTES:

- ENGINEER / CONTRACTOR TO CONFIRM PIPE MATERIALS AND APPLICABLE ADAPTERS
- CONTRACTOR IS RESPONSIBLE FOR MATERIAL AND LABOR TO BRING CASTINGS TO FINISHED GRADE
- CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
- UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.

BARRACUDA MAX S4
CONCRETE MANHOLE
STANDARD DETAIL

DATE: 09/06/24 | DRAWN: JLM | DRAWING #: 531-410 | CHECKED: SMW

DATE/BY	DESCRIPTION
AM	LAT
DRWN	CHKD

Barracuda Max
Stormwater Separator

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

1 SHEET OF 1

PRELIMINARY
NOT FOR CONSTRUCTION

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401 hall st. sw, ste. 213
grand rapids, michigan 49503
2800 s. 11th street
kalamazoo, michigan 49009

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CITY OF KALAMAZOO SITE PLAN SUBMITTAL 6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

Sheet Title: UTILITY DETAILS
Project: WEST CEDAR APARTMENTS
Client: 116 WEST CEDAR, LLC

6/3/26
Sheet
C 401

H:\23-141D (Project Stardust)_FINAL DRAWINGS\C 401 Utility Details.dwg LAST SAVED BY: JUITVLUGT ON 5/13/2026

Advanced Drainage Systems, Inc.

SiteAssist®
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR WEBSITE

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

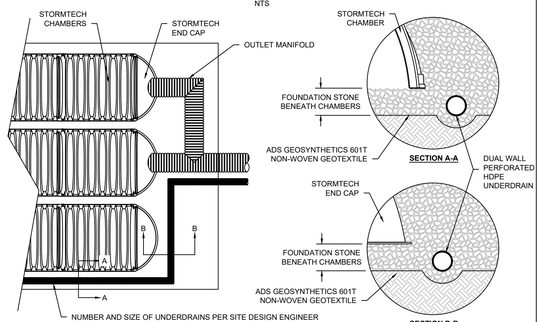
NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

UNDERDRAIN DETAIL
NTS



5 UNDERDRAIN DETAIL

MC-SERIES END CAP INSERTION DETAIL
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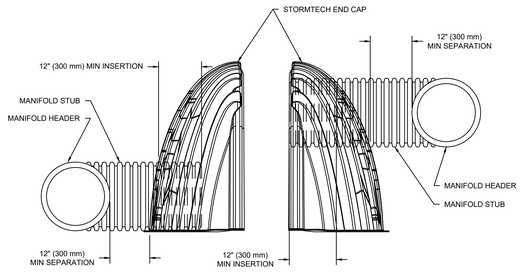
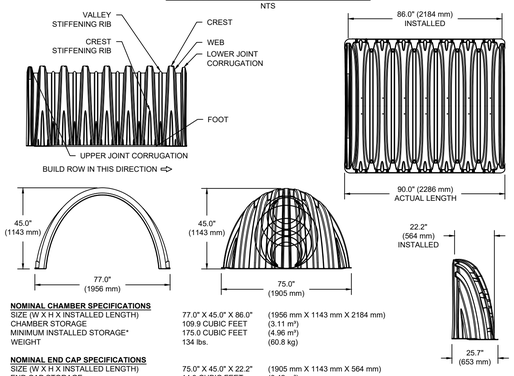


NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

6 MC-SERIES END CAP INSERTION DETAIL

MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" (152 mm) STONE BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

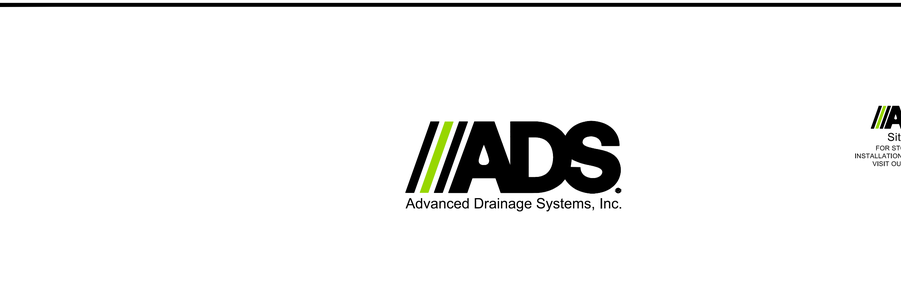
PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

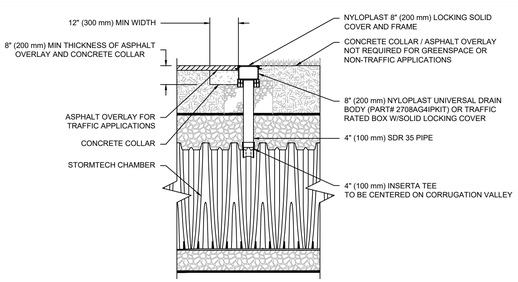
CUSTOM PARTIAL CUT INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

2 MC-3500 TECHNICAL SPECIFICATIONS



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

3 MC-3500 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)
NTS

4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

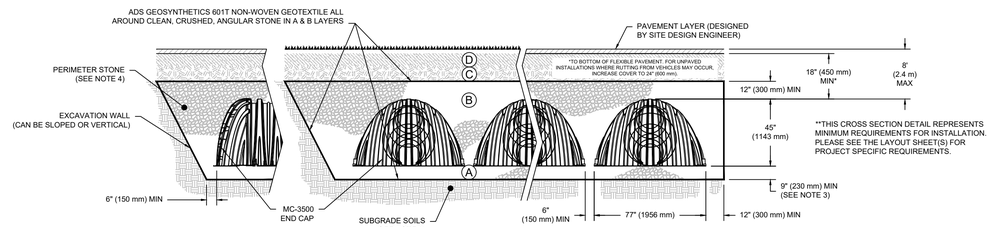
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 18" (450 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3" (75 mm).
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 MC-3500 CROSS SECTION DETAIL

hurley & stewart
NOT TO SCALE
hurley & stewart, llc
main: 269.552.4960
fax: 269.552.4961
www.hurleystewart.com
401 hall st. sw, ste. 213
grand rapids, michigan 49503
2800 s. 11th street
kalamazoo, michigan 49009

REVISIONS:

ISSUED FOR:

1	COK CHECKLIST APPLICATION	4/16/26
2	OWNER REVIEW	5/7/26
	CITY OF KALAMAZOO SITE PLAN SUBMITTAL	6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: JS/26

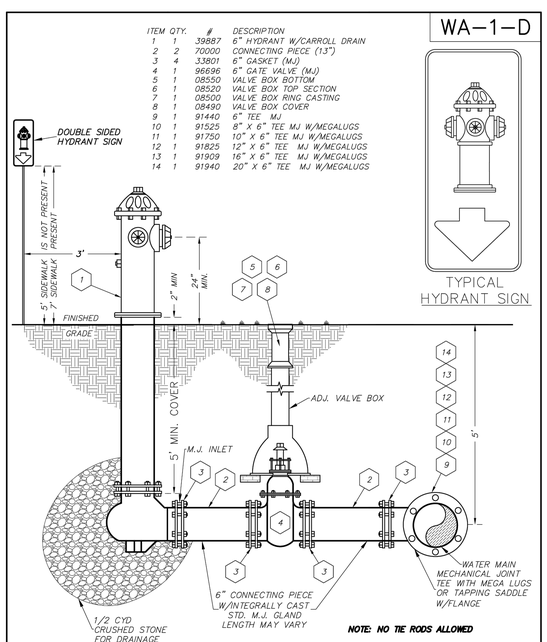
STORMTECH DETAILS
WEST CEDAR APARTMENTS
116 WEST CEDAR, LLC

Sheet Title:
Project:
Client:

6/3/26
Sheet
C 402

WA–1–D

ITEM	QTY.	#	DESCRIPTION
1	1	39887	6" HYDRANT W/CARROLL DRAIN
2	2	70000	CONNECTING PIECE (13")
3	4	33801	6" GASKET (MJ)
4	1	96696	6" GATE VALVE (MJ)
5	1	08550	VALVE BOX BOTTOM
6	1	08520	VALVE BOX TOP SECTION
7	1	08500	VALVE BOX RING CASTING
8	1	08490	VALVE BOX COVER
9	1	91440	6" TEE MJ
10	1	91525	8" X 6" TEE MJ W/MEGALUGS
11	1	91750	10" X 6" TEE MJ W/MEGALUGS
12	1	91825	12" X 6" TEE MJ W/MEGALUGS
13	1	91909	16" X 6" TEE MJ W/MEGALUGS
14	1	91940	20" X 6" TEE MJ W/MEGALUGS



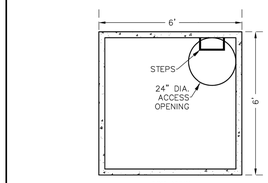
TYPICAL HYDRANT SIGN

CITY OF KALAMAZOO
Department Of Public Services

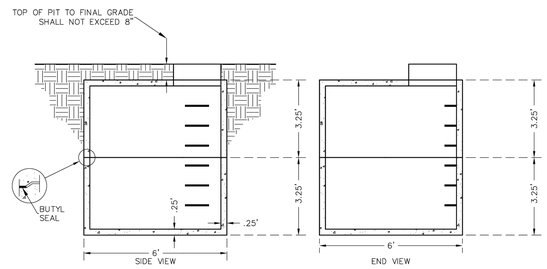
TYPICAL FIRE HYDRANT & GATE VALVE DETAIL

RECOMMENDED BY
APPROVED BY
APPROVED BY
ACCEPTED BY
DATE

WA–07–A



NOTES:
1. METER VAULT DESIGN TO BE SUBMITTED AND APPROVED FOR EACH INDIVIDUAL INSTALLATION. DESIGN SHALL CONFORM TO KALAMAZOO WATER ENGINEERING STANDARDS LATEST REVISION.
2. THE DISTANCE BETWEEN RUNGS, CLEATS AND STEPS SHALL NOT EXCEED 12 INCHES AND SHALL BE UNIFORM THROUGHOUT THE LENGTH OF THE LADDER.
3. PLACEMENT OF CURB BOX CAN VARY FROM A MAXIMUM OF 5 FEET OUTSIDE THE PROPERTY LINE TO A MAXIMUM OF 5 FEET INSIDE THE PROPERTY LINE. PLACEMENT OF THE CURB BOX OUTSIDE THE PROPERTY LINE IS PREFERRED.
4. ACCESS COVER – FORD MC–24–MB–T WITH AN INNER LID, VESTAL 32–055, 32–104, AND 32–046 OR APPROVED EQUAL.

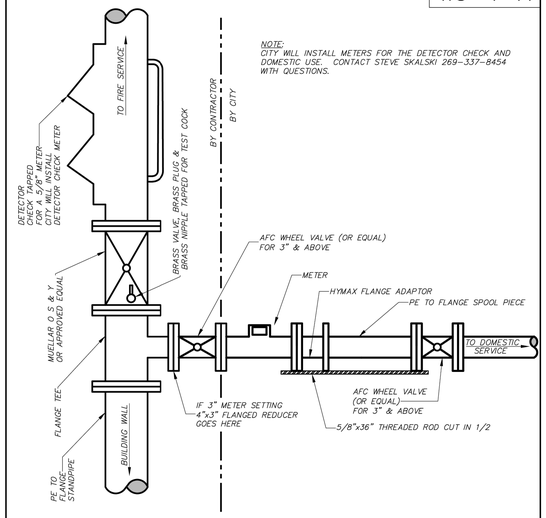


CITY OF KALAMAZOO
Department Of Public Services

STANDARD METER PIT

RECOMMENDED BY
APPROVED BY
APPROVED BY
ACCEPTED BY
DATE

WS–4–A



NOTE:
CITY WILL INSTALL METERS FOR THE DETECTOR CHECK AND DOMESTIC USE. CONTACT STEVE SKALSKI 269–337–8454 WITH QUESTIONS.

CITY OF KALAMAZOO
Department Of Public Services

TYPICAL FIRE SERVICE DETAIL
3" 4" 6"

RECOMMENDED BY
APPROVED BY
APPROVED BY
ACCEPTED BY
DATE

NOT TO SCALE

hurley & stewart, llc
main: 269.552.4960
fax: 269.552.4961
www.hurleystewart.com
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grand rapids, michigan 49503

hurley & stewart
2800 s. 11th street
kalamazoo, michigan 49009

REVISIONS:

ISSUED FOR:

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	CITY OF KALAMAZOO SITE PLAN SUBMITTAL	6/3/26

Job No: 23-141D • PM: --- • Designer: LAD • QA/QC: 3/5/26

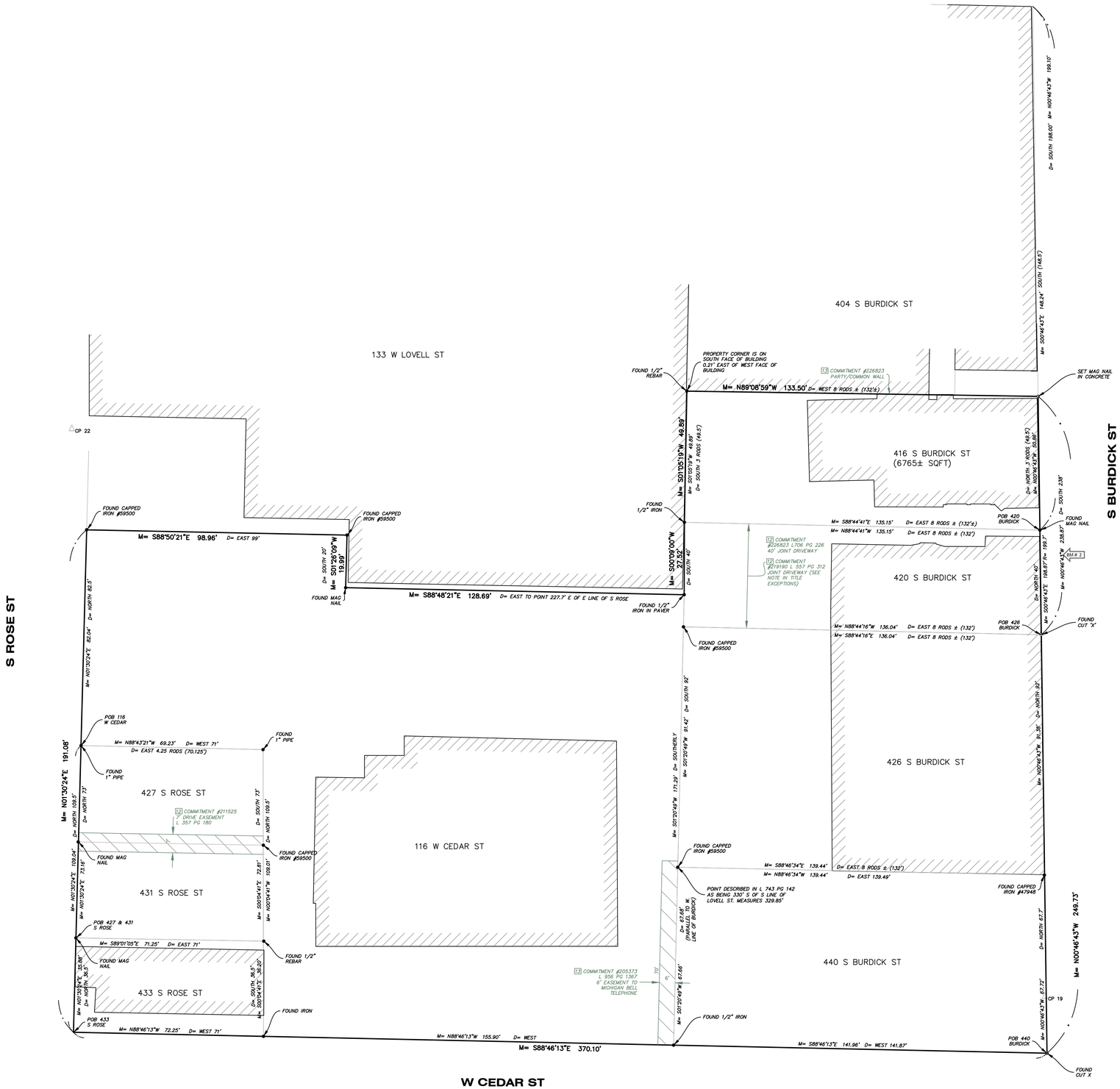
Sheet Title: WATER MAIN DETAILS
Project: WEST CEDAR APARTMENTS
Client: 116 WEST CEDAR, LLC

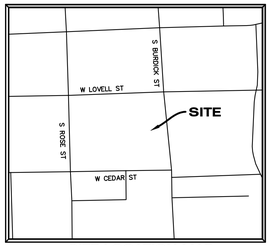
6/3/26
Sheet
C 403

H:\23-141D (Project Stardust)_FINAL DRAWINGS\C 401 Utility Details.dwg LAST SAVED BY: JUITVLUGT ON 5/13/2026

BOUNDARY/TOPOGRAPHIC SURVEY

BOUNDARY





SITE LOCATION MAP
NOT TO SCALE

SECTION 22, TOWN 02 S, RANGE 11 W, CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN
4169 S BURDICK ST

N
W E
S

0 10 20 40
1 inch = 20 ft.

STATE OF MICHIGAN
TRAVIS ADAM KRENTZ
PROFESSIONAL SURVEYOR
No. 4001057885
LICENSED PROFESSIONAL SURVEYOR

TRAVIS A. KRENTZ PROFESSIONAL SURVEYOR # 57885

Know what's below. Call before you dig.

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2800 s. 11th street
kalamazoo, michigan 49009
269.552.4960 fax 269.552.4961
www.hurleystewart.com
hurley & stewart

Job No. 23-141D P.M.:TAK DR: BDE QA/QC: 12/18/23
ISSUED FOR/REVISIONS: 12/18/23
#1 BOUNDARY/TOPOGRAPHIC SURVEY

BOUNDARY/TOPOGRAPHIC SURVEY
PROJECT STARDUST
THE HINMAN COMPANY

Sheet Title:
Project:
Client:

12/18/23
Sheet
S-1
1 of 3

BOUNDARY/TOPOGRAPHIC SURVEY

TOPOGRAPHIC

N
W E
S

0 10 20 40
1 inch = 20 ft.

133 W LOVELL ST

404 S BURDICK ST

416 S BURDICK ST
(6765± SQFT)

420 S BURDICK ST

426 S BURDICK ST

440 S BURDICK ST

S BURDICK ST

S ROSE ST

427 S ROSE ST

431 S ROSE ST

433 S ROSE ST

116 W CEDAR ST

W CEDAR ST

NOTE: ELEVATIONS AND EVIDENCE OF UTILITIES ARE THE ONLY ITEMS LOCATED WITHIN THE PROPERTY BOUNDARY. ASPHALT, CONCRETE, CURBS, BOLLARDS, SIGNS, WALLS, FENCES, LANDSCAPING, ECT. ARE NOT SHOWN.

CP 22
TEST WELL
1.5" DIAMETER PLASTIC LID
3.5" DIAMETER PLASTIC LID
FACE OF CONCRETE WALL
DUMPSTER
FFE GLOHD = 789.32
LOADING DOCK
TRENCH DRAIN RIM = 785.51'
(5) CONCRETE RISERS
FFE SILL = 789.33
FFE SILL = 789.34
0.92' WIDE CONCRETE WALL
8.0' TALL CHAIN LINK FENCE
HVAC
SOUTH FACE OF BUILDING AT 404 S BURDICK ST ON PROPERTY LINE
6.0' TALL WOOD PRIVACY FENCE
UNABLE TO ACCESS AREA
WOOD WALL WITH 4' SINGLE DOOR AND 6' SINGLE DOOR IN MIDDLE
FFE = 787.26
FFE = 787.23
FFE AT DOOR = 787.08
FFE = 787.04
FFE AT DOOR = 787.06
FFE SILL = 787.07
BIKE RACK
OVERHEAD ELECTRIC PER CONSUMERS ENERGY MAPS
BUILDING FACE OF MARBLE
BUILDING FACE OF BRICK
FFE SILL = 787.05
BUILDING OVERHANG (TYP)
CONCRETE FOUNDATION ON PROPERTY LINE
NORTH FACE OF BUILDING AT 416 S. BURDICK ST ON PROPERTY LINE
DOOR
FRONT ENTRANCE UNDER OVERHANG
(2) ELECTRIC PANELS
FFE SILL = 788.99
FFE = 788.98
THE FACE OF BUILDING IS APPROXIMATELY 0.23' WEST OF PROPERTY LINE
(4) CONCRETE RISERS WITH WOODEN DECK ON TOP
WOOD DECK WITH (3) WOOD RISERS
DECK AREA
POB 420 BURDICK
FFE STOOP (OLD DOOR) = 786.85
FFE STOOP = 786.71
CONCRETE AND WOODEN STAIR STRUCTURE
FFE CONC STOOP = 789.42
POB 426 BURDICK
FFE CONC STOOP = 787.30
FFE CONC STOOP = 787.30
BIKE RACK
FFE STOOP = 786.49
(2) 2" CONDUITS
FFE CONC STOOP (STEP DOWN INSIDE) = 787.16
FFE STOOP = 787.13
FFE STOOP = 786.48
FFE SILL = 787.26
FFE STOOP = 787.16
STONE SCULPTURE
STONE SCULPTURE
DRINKING FOUNTAIN
CP 20
CP 21
BM # 2
BM # 17
(16) CONCRETE RISERS
FFE SILL = 777.85
FFE SILL = 787.54
FFE SILL = 787.60
RECESSED WINDOWS
FFE GLOHD = 787.17
FFE GLOHD = 787.21 (OVERHEAD DOOR (TYP))
FFE GLOHD = 787.20
FFE GLOHD = 787.20
FFE GLOHD = 787.18
FFE SILL = 787.56
POB 116 W CEDAR
POB 427 & 431 S ROSE
FFE SILL = 790.86
FFE SILL = 787.85
METAL PLATE SIGN ON BUILDING
ELECTRIC PANEL
POB 433 S ROSE
0.66' WIDE CONCRETE RETAINING WALL
BM # 3
CP 26199
CP 24
CP 23
CP 19
POB 440 BURDICK
GAS PER CONSUMERS ENERGY MAPS
COMMUNICATIONS TRANSMISSION LINE PER AT&T MAPS
ABANDONED PER CITY OF KALAMAZOO MAPS
FIBER PER KEPS MAPS
FIBER PER CITY OF KALAMAZOO MAPS
COMCAST HANDHOLE
GAS PER CONSUMERS ENERGY MAPS
COMMUNICATION PER AT&T MAPS
COMMUNICATIONS PER CHARTER MAPS
OVERHEAD COMMUNICATIONS PER CHARTER MAPS
COMMUNICATIONS PER EVERSTREAM MAPS
COMMUNICATIONS PER AT&T MAPS
COMMUNICATIONS PER CHARTER MAPS
COMMUNICATIONS PER COMCAST MAPS
COMMUNICATIONS PER AT&T MAPS
GAS PER CONSUMERS ENERGY MAPS
2" MP
6" MAIN
12" W
8" W
4" W
2 1/4" W
W WWM_0
785
786
787
788

STATE OF MICHIGAN
TRAVIS ADAM KRENTZ
PROFESSIONAL SURVEYOR
No. 4001057885
LICENSED PROFESSIONAL SURVEYOR

TRAVIS A. KRENTZ PROFESSIONAL SURVEYOR # 57885

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Job No. 23-141D P.M.:TAK DR: BDE QA/QC: 12/18/23

ISSUED FOR/REVISIONS: 12/16/23

#1 BOUNDARY/TOPOGRAPHIC SURVEY

BOUNDARY/TOPOGRAPHIC SURVEY
PROJECT STARDUST
THE HINMAN COMPANY

Sheet Title:
Project:
Client:

12/18/23
Sheet
S-2
2 of 3

BOUNDARY/TOPOGRAPHIC SURVEY

SURVEYOR'S NOTES

1. BASIS OF BEARINGS: MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83
2. CONTOUR INTERVAL = 1 FOOT
3. UTILITIES SHOWN ARE BASED ON FIELD LOCATION OF SURFACE EVIDENCE AND RECORDS PROVIDED BY OTHERS. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. ADDITIONAL UTILITIES MAY BE ENCOUNTERED. PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL MISS DIG AT 1-800-482-7171.
4. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE LAND DEPICTED IN THIS SURVEY LIES IN ZONE X. MAP 26077C0183D, EFFECTIVE DATE 02/17/2010.
5. NO WETLANDS ON SITE PER THE NATIONAL WETLANDS INVENTORY. A DELINEATION OF THE WETLANDS BY A QUALIFIED CONSULTANT WAS NOT PERFORMED AT THE TIME OF SURVEY.
6. OVERALL PARCEL CONTAINS 1.73± ACRES (75,254± SQFT)

EXISTING STRUCTURE DATA

1 4.0' CONCRETE SAN MH
RIM = 786.43'
INV. S PLUGGED
INV. 2" E WATER VALVE = 781.93'±
INV. 8" W CLAY = 779.88'
SEDIMENT = 779.88'

2 2.0' WATER MH
RIM = 784.95'
TOP BOLT VALVE = 782.50'±
SEDIMENT = 781.65'

3 6.0' CONCRETE STM MH
RIM = 785.28'
INV. 12" NW SLCPP = 780.13'
OFFSET, NO OTHER PIPES VISIBLE
WATER = 779.63'
SUMP = 777.78'

4 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.75'
INV. 12" S CONCRETE = 782.75'
SEDIMENT = 782.75'

5 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.74'
INV. 8" VERTICAL PIPE W
INV. 12" N CONCRETE = 782.74'

6 4.0' BRICK SAN MH
RIM = 784.81'
INV. 8" N CLAY = 775.76'
INV. 8" S CLAY = 775.66'
INV. 8" E CLAY = 776.01'
INV. 8" W PVC = 775.86'

7 4.0' BRICK STM MH
RIM = 784.86'
INV. 12" N CLAY = 778.26'
INV. 12" S IRON = 778.21'
INV. 12" E CLAY = 778.26'
INV. 10" W CLAY = 778.26'
SEDIMENT = 778.21'

8 4.0' BRICK SAN MH
RIM = 784.48'
INV. 12"± N CLAY = 775.53'
INV. 12"± S CLAY = 775.43'

9 4.0' BRICK CONCRETE STM MH
RIM = 783.62'
INV. 15" N CLAY = 777.47'
INV. 15" S CLAY = 777.37'
INV. 12" E CLAY = 777.37'±
SEDIMENT = 777.57'

10 TRAFFIC SIGNAL MH
RIM = 784.98'

11 4.0' BRICK SAN MH
RIM = 785.11'
INV. 8" E CLAY = 777.81'
INV. 8" W CLAY = 777.56'
INV. 8" N CLAY = 778.46'
INV. 8" S CLAY = 777.91'

12 4.0' CONCRETE SAN CB
RIM = 785.13'
INV. 8" NE CLAY FULL OF SEDIMENT = 787.13'±
SEDIMENT = 778.13'

13 2.0' CONCRETE STM CB
RIM = 785.21'
INV. 4" E CLAY = 783.61'
SEDIMENT = 783.21'

14 2.0' CONCRETE STM CB
RIM = 785.48'
INV. 4" W CLAY = 783.98'
SEDIMENT = 783.48'

15 2.0' CONCRETE STM CB
RIM = 785.98'
INV. 4" SE CLAY = 784.58'
SEDIMENT = 782.78'

16 2.0' CONCRETE STM CB
RIM = 785.65'
INV. 4" SE CLAY = 784.20'
WATER = 783.45'
SEDIMENT = 782.90'

17 4.0' CONCRETE STM LB
RIM = 785.94'
NO PIPES VISIBLE
SEDIMENT = 781.34'

UNKNOWN MH (UNABLE TO OPEN)
RIM = 786.98'

19 4.0' CONCRETE STM LB
RIM = 785.58'
NO PIPES VISIBLE
SUMP = 779.23'

20 2.0' STM CB
RIM = 784.62'
NO PIPES VISIBLE
WATER = 783.72'
SEDIMENT = 783.62'

21 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.44'
INV. 12" W CONCRETE = 782.14'
SEDIMENT = 782.14'

22 2.0' RECTANGLE CONCRETE STM CB
RIM = 784.50'
INV. 12" E CONCRETE = 782.10'
INV. 8" VERTICAL PIPE S = 780.40'±

23 2.0' BLOCK STM CB
RIM = 784.34'
INV. 8" VERTICAL PIPE S = 779.54'
NO OTHER PIPES VISIBLE

24 4.0' BLOCK STM MH
RIM = 785.11
INV. 15" W CLAY = 779.91'±
INV. 12" S CLAY = 780.01'
PIPES FULL OF SEDIMENT
SEDIMENT = 780.01'

25 4.0' BLOCK STM MH
RIM = 784.04'
INV. 12" N IRON = 780.54'
INV. 12" S CLAY = 780.44'
INV. 12" E CONCRETE = 779.09'
INV. 6" SW CLAY = 779.34'
SEDIMENT = 779.09'

26 4.0' BLOCK SAN MH
RIM = 784.23
INV. 8" N PVC = 777.43'
INV. 6" S CLAY = 776.88'±
INV. 8" E PVC = 776.58'
INV. 8" W PVC = 776.68'

259 BELL SYSTEMS COMMUNICATION MH
RIM = 785.47'

260 4.0' BRICK SAN MH
RIM = 785.49'
INV 8" N PVC 775.94'
INV 8" S PVC 775.89'

261 4.0' BRICK STM MH
RIM = 785.62'
INV 12" NW CLAY = 778.27'
INV 15" N CLAY = 778.02'
INV 12" NE CLAY = 778.02'
INV 12" W CLAY = 778.42' ±
INV 15" S CLAY = 778.02'
INV 12" SW CLAY = 778.12'
SUMP = 778.02'

262 STM CB
RIM = 784.85
INV 4" NW PVC = 782.65'
VERTICAL CLAY = 780.00'± SE

263 2.0' BLOCK STM CB
RIM = 785.17'
INV 8" N PVC = 781.47'
INV 12" SW CLAY = 779.32'
SUMP = 779.32'

264 2.0' CONCRETE STM CB
RIM = 785.27'
INV 10" E PVC = 781.32'
WATER = 781.27'
SUMP = 780.97'

265 2.0' CONCRETE STM CB
RIM = 785.38'
INV 8" S PVC 782.78'
WATER = 782.73
SUMP = 782.68

266 4.0' CONCRETE STM MH
RIM = 785.74'
INV 15" N CLAY = 778.49'
INV 15" S CLAY = 778.59'
INV 12" W CLAY = 780.99 ±

267 4.0' CONCRETE STM MH
RIM = 786.40'
INV 15" N CLAY = 779.55'
INV 15" S CLAY = 779.50'
INV 12" E CLAY = 779.65'
SUMP = 779.50'

268 4.0' BRICK SAN MH
RIM = 786.61'
INV 4" W CLAY = 778.71'
INV 6" W CLAY = 778.81'
INV 10" N CLAY 778.01'
INV 10" S CLAY = 778.11
CHANNEL = 778.06'

269 1.0' NYLOPLAST STM YD
RIM = 787.27'
INV 12" N PVC = 783.52'
INV 12" S PVC = 783.52
WATER = 783.52'
SUMP 783.12'

270 CONSUMERS ENERGY ELECTRIC MH
RIM = 786.93'

271 4.0' BRICK STM MH
RIM = 786.94'
INV 10" E CLAY = 782.64'
INV 6" S CLAY = 783.34' ±
SEDIMENT = 780.64'

272 6.0' CONCRETE STM LB
RIM = 787.44'
INV 12" E SLCPP = 782.94'
INV 12" S SLCPP = 782.64'
INV 8" W SLCPP = 784.14'
INV 8" W SLCPP = 784.14'
SUMP = 782.14'

273 4.0' CONCRETE STM MH
RIM = 787.07'
INV 15" N CLAY = 780.32'
INV 15" S CLAY = 780.32'
SEDIMENT = 780.32'

MISS DIG DESIGN TICKET DATA

123.NET, INC. FIBER OPTICS – 248-431-4584 – NO RESPONSE – 12/05/23
AT&T FIBER OPTICS – PHILLIP BARDOZ 269-384-4476– MAPS PROVIDED – 12/09/23
AT&T TELEPHONE – PHILLIP BARDOZ 269-384-4476– MAPS PROVIDED – 12/09/23
CHARTER COMMUNICATIONS CABLE TV – 800-778-9140 – MAPS PROVIDED – 12/11/23
CHARTER COMMUNICATIONS FIBER OPTICS – 800-778-9140 – MAPS PROVIDED – 12/11/23
CLIMAX TELEPHONE DBA METRO FIBERNET – 800-778-9140 – CLEAR – 12/07/23
COMCAST CABLE TV – BRITTNEY HANSON CCCUTILITYREQUESTS@TEAMSIGMA.COM – NO RESPONSE – 12/14/23
CONSUMERS ENERGY ELECTRIC – ANDRE D. TAYLOR 269-337-2245 – MAPS PROVIDED – 12/11/23
CONSUMERS ENERGY ELECTRIC SUB METRO – 800-477-5050 – NO RESPONSE – 12/14/23
CONSUMERS ENERGY GAS – CONSUMERS ENERGY SIMS WEBSIRTE – MAPS PROVIDED – 12/11/23
EVERSTREAM FIBER OPTICS – HEATHER SHAWL 616-393-0138 EXT. 119 – NO RESPONSE – 12/14/23
KALAMAZOO CITY DPS POTABLE WATER, SANITARY SEWER, STORM SEWER, TRAFFIC – WILL EICHELBERGER 269-337-8727 – MAPS PROVIDED – 12/08/23
KEPS TECHNOLOGIES, INC. DBA ACD.NET FIBEROPTICS – 517-999-9999, OPTION 1 – MAPS PROVIDED – 12/08/23
LEVEL 3 NOW LUMEN FIBER OPTICS – 877-366-8344 – MAPS PROVIDED – 12/07/23
U.S. SIGNAL CORPORATION FIBER OPTICS – 616-455-9840 – NO RESPONSE – 12/14/23
WINDSTREAM COMMUNICATIONS FIBER OPTICS – 800-289-1901 – MAPS PROVIDED – 12/07/23
ZAYO BANDWIDTH MIDWEST, LLC FIBER OPTICS – 800-961-6500 – NO RESPONSE – 12/4/23

ENLARGEMENTS

427 & 431 S ROSE
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #211525 EFFECTIVE DATE 1/2/2022 AT 8:00AM

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

PART OF THE NORTHWEST 1/4 OF SECTION 22, TOWN 2 SOUTH, RANGE 11 WEST, BEING MORE PARTICULARLY DESCRIBED AS: BEGINNING AT A POINT ON THE EAST SIDE OF ROSE STREET 36.5 FEET NORTH OF THE NORTH LINE OF CEDAR STREET; THENCE NORTH ALONG THE EAST LINE OF ROSE STREET 73 FEET; THENCE EAST 4.25 RODS; THENCE SOUTH 73 FEET; THENCE WEST TO THE PLACE OF BEGINNING.

1. 39-06-22-130-003, 2. 39-06-22-130-002

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #211525 EFFECTIVE DATE 1/2/2022 AT 8:00AM

12 EASEMENT FOR MUTUAL DRIVEWAY, AS RECORDED IN LIBER 357 ON PAGE 180 (SHOWN).

13 TERMS, COVENANTS, AND CONDITIONS OF RESOLUTION, AS RECORDED IN LIBER 820 ON PAGE 721 (NOT SURVEY MATTERS).

433 S ROSE
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205443 EFFECTIVE DATE 6/9/2021 AT 8:00AM

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

COMMENCING ON THE NORTHEAST CORNER OF ROSE AND CEDAR STREETS; THENCE NORTH 36.5 FEET; THENCE EAST 71.00 FEET; THENCE SOUTH 36.5 FEET; THENCE WEST 71.00 FEET TO THE PLACE OF BEGINNING. BEING A PART OF THE NORTHWEST 1/4 OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 11 WEST.

39-06-22-130-001

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205443 EFFECTIVE DATE 6/9/2021 AT 8:00AM

11 TERMS, COVENANTS, AND CONDITIONS OF PLANNING COMMISSION RESOLUTION, AS RECORDED IN LIBER 820 ON PAGE 721 (NOT SURVEY MATTERS).

116 W CEDAR
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205373 EFFECTIVE DATE 8/26/2021 AT 8:00AM

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

BEGINNING AT A POINT ON THE EAST LINE OF SOUTH ROSE STREET 109.5 FEET NORTH OF THE NORTH LINE OF WEST CEDAR STREET; THENCE NORTH 82.5 FEET ALONG THE EAST LINE OF SOUTH ROSE STREET; THENCE EAST 99 FEET PARALLEL TO THE NORTH LINE OF WEST CEDAR STREET; THENCE SOUTH 20 FEET PARALLEL TO THE EAST LINE OF SOUTH ROSE STREET; THENCE EAST PARALLEL TO THE NORTH LINE OF WEST CEDAR STREET TO A POINT 227.7 FEET EAST OF THE EAST LINE OF SOUTH ROSE STREET; THENCE SOUTHERLY TO A POINT ON THE NORTH LINE OF WEST CEDAR STREET 141.87 FEET WEST OF THE WEST LINE OF SOUTH BURDICK STREET; THENCE WEST ALONG THE NORTH LINE OF WEST CEDAR STREET TO A POINT 71 FEET EAST OF THE EAST LINE OF SOUTH ROSE STREET; THENCE NORTH 109.5 FEET PARALLEL TO THE EAST LINE OF SOUTH ROSE STREET; THENCE WEST 71 FEET PARALLEL TO THE NORTH LINE OF WEST CEDAR STREET TO THE PLACE OF BEGINNING.

39-06-22-130-004

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205373 EFFECTIVE DATE 8/26/2021 AT 8:00AM

12 TERMS, COVENANTS, AND CONDITIONS OF PLANNING COMMISSION RESOLUTION, AS RECORDED IN LIBER 820 ON PAGE 721 (NOT SURVEY MATTERS).

13 RIGHT OF WAY IN FAVOR OF MICHIGAN BELL TELEPHONE COMPANY, AS RECORDED IN LIBER 956 ON PAGE 1367 (SHOWN).

416 S BURDICK
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT #226823 EFFECTIVE DATE 11/28/2023 AT 8:00AM

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

COMMENCING ON THE WEST LINE OF BURDICK STREET 9 RODS SOUTH FROM THE SOUTHWEST CORNER OF BURDICK AND LOVELL STREETS, IN SAID CITY OF KALAMAZOO, AND RUNNING THENCE WEST 8 RODS, MORE OR LESS, TO LAND FORMERLY OWNED BY CALEB SWEETLAND; THENCE SOUTH 3 RODS; THENCE EAST 8 RODS, MORE OR LESS, TO THE WEST LINE OF BURDICK STREET; THENCE NORTH ON THE WEST LINE OF BURDICK STREET 3 RODS TO THE PLACE OF BEGINNING.

TOGETHER WITH JOINT DRIVEWAY RIGHTS EXISTING IN THE DRIVEWAY BETWEEN THE ABOVE DESCRIBED PREMISES AND THE NORTH 40 FEET OF THE LAND AND PREMISES IMMEDIATELY ADJOINING ON THE SOUTH THEREOF.

39-06-22-126-002

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT #226823 EFFECTIVE DATE 11/28/2023 AT 8:00AM

12 THE RIGHTS OF OTHERS IN AND TO THE USE OF THE JOINT DRIVEWAY RIGHTS DESCRIBED IN SCHEDULE C AND AS EVIDENCED IN LIBER 706 ON PAGE 226 (SHOWN).

13 RIGHTS OF THE ADJOINING OWNER(S) IN AND TO THE PARTY/COMMON WALL LOCATED ALONG THE NORTH SIDE OF THE PROPERTY INSURED HEREIN, AS DISCLOSED BY COUNTY GIS MAP, TOGETHER WITH ANY AND ALL LIABILITY FOR THE MAINTENANCE, SUPPORT, USE AND REPAIR ASSOCIATED THEREWITH (PARTY WALL SHOWN).

420 & 426 S BURDICK
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #219190 EFFECTIVE DATE 12/15/2022 AT 8:00AM (REV. NO. 1)

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

PARCEL 1:

PART OF THE NORTHWEST 1/4 OF SECTION 22, TOWN 2 SOUTH, RANGE 11 WEST, DESCRIBED AS COMMENCING ON THE WEST LINE OF BURDICK STREET 198 FEET SOUTH OF THE SOUTH LINE OF LOVELL STREET; THENCE WEST 8 RODS; THENCE SOUTH 40 FEET; THENCE EAST 8 RODS; THENCE NORTH 40 FEET.

39-06-22-126-003

PARCEL 2:

PART OF THE NORTHWEST 1/4 OF SECTION 22, TOWN 2 SOUTH, RANGE 11 WEST, DESCRIBED AS COMMENCING ON THE WEST LINE OF BURDICK STREET 238 FEET SOUTH OF THE SOUTH LINE OF LOVELL STREET; THENCE WEST 8 RODS; THENCE SOUTH 92 FEET; THENCE EAST 8 RODS; THENCE NORTH 92 FEET.

39-06-22-131-001

39-06-22-126-003, 39-06-22-131-001

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #219190 EFFECTIVE DATE 12/15/2022 AT 8:00AM (REV. NO. 1)

12 EASEMENT FOR DRIVEWAY PURPOSES BY INSTRUMENT RECORDED IN LIBER 557 ON PAGE 372 (JOINT DRIVEWAY REFERENCED IN DEED, NOT PLOTTABLE BASED ON INFORMATION PROVIDED IN L 706 PG 372, PRESUMED TO BE SAME DRIVE REFERENCED IN L 706 PG 226, UNABLE TO CONFIRM).

440 S BURDICK
SCHEDULE C LEGAL DESCRIPTION
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205374 EFFECTIVE DATE 4/28/2022 AT 8:00AM

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

LAND SITUATED IN THE CITY OF KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN:

PART OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 22, TOWN 2 SOUTH, RANGE 11 WEST, BEGINNING AT THE NORTHWEST CORNER OF BURDICK AND CEDAR STREETS; THENCE WEST ALONG THE NORTH LINE OF CEDAR STREET 141.87 FEET; THENCE NORTH PARALLEL TO THE WEST LINE OF BURDICK STREET 67.68 FEET; THENCE EAST TO THE WEST LINE OF BURDICK STREET 139.49 FEET; THENCE SOUTH ALONG THE WEST LINE OF BURDICK STREET 67.7 FEET TO THE PLACE OF BEGINNING.

39-06-22-131-002

SCHEDULE B SECTION II EXCEPTIONS
TITLE CO.: SUN TITLE AGENCY OF MICHIGAN, LLC
UNDERWRITTEN BY: OLD REPUBLIC TITLE INSURANCE COMPANY
COMMITMENT #205374 EFFECTIVE DATE 4/28/2022 AT 8:00AM

12 TERMS, COVENANTS, AND CONDITIONS OF AGREEMENT, AS RECORDED IN LIBER 743 ON PAGE 142 (NOT PLOTTABLE).

STATE OF MICHIGAN
TRAVIS ADAM KRENTZ
PROFESSIONAL SURVEYOR
No. 4001057885
LICENSED PROFESSIONAL SURVEYOR

TRAVIS A. KRENTZ PROFESSIONAL SURVEYOR # 57885

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Job No. 23-141D P.M.:TAK DR: BDE QA/QC: 12/18/23
ISSUED FOR/REVISIONS:
#1 BOUNDARY/TOPOGRAPHIC SURVEY - - - - - 12/18/23

BOUNDARY/TOPOGRAPHIC SURVEY
PROJECT STARDUST
THE HINMAN COMPANY

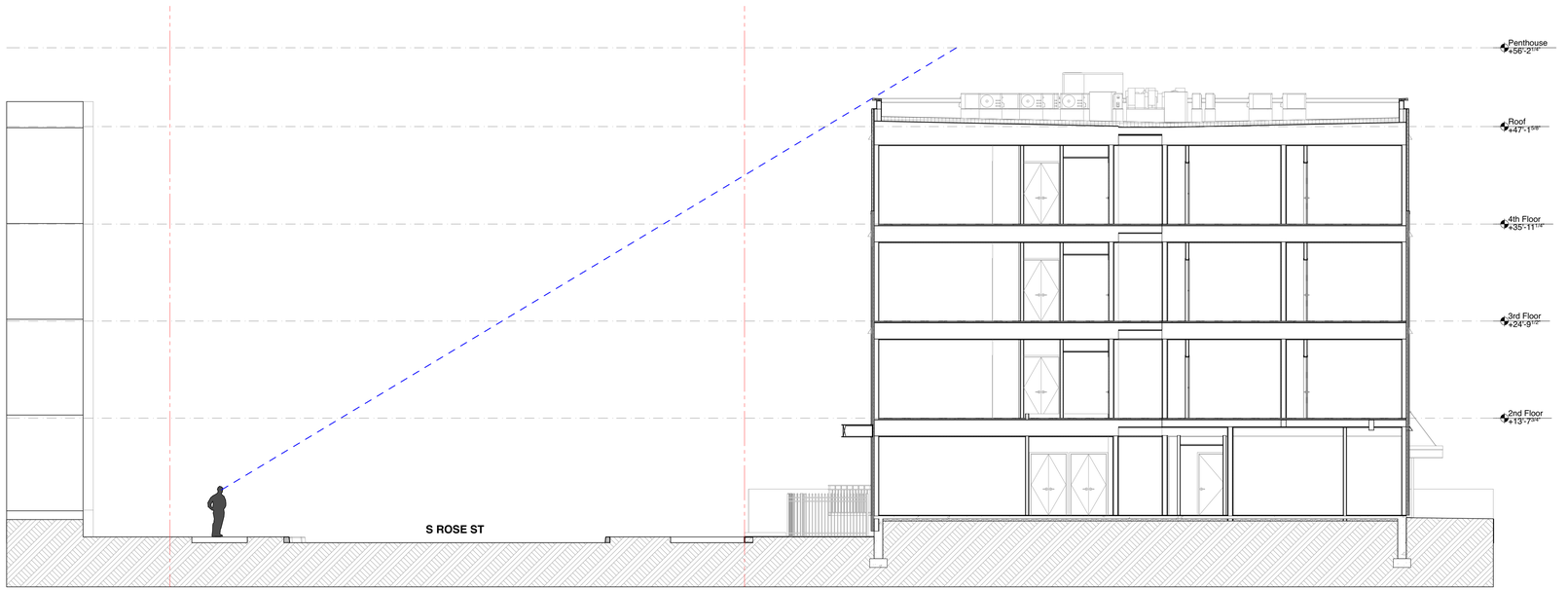
Sheet Title:
Project:
Client:

12/18/23
Sheet
S-3
3 of 1

2 Rooftop Visibility Study - W Cedar St

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

0 4' 8' 16'



1 Rooftop Visibility Study - S Rose St

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

0 4' 8' 16'

640 N Lasalle
Suite 400
Chicago Illinois 60654

312 337 3344

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HINMAN

avb

431 S Rose
431 S Rose
Kalamazoo, MI 49007
Hinman Company / AVB Inc.

	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

project number 252958

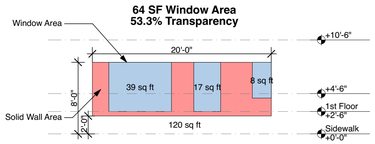
scale As Noted

date 6/3/26

sheet title Rooftop Visibility Diagrams

sheet number

A010

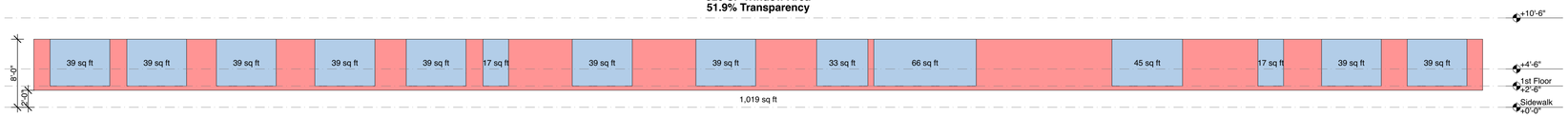


Zoning Ordinance 50-5.5B (b): Entrance (Stoop)
(1) Transparency. Minimum transparency is 50% measured between two and eight feet above the grade of the sidewalk.

2 Building Elevation - W Cedar St.

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

0 4' 8' 16'



1 Building Elevation - S Rose St.

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

0 4' 8' 16'

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431 S Rose
Kalamazoo, MI 49007
Hinman Company / AVB Inc.

	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

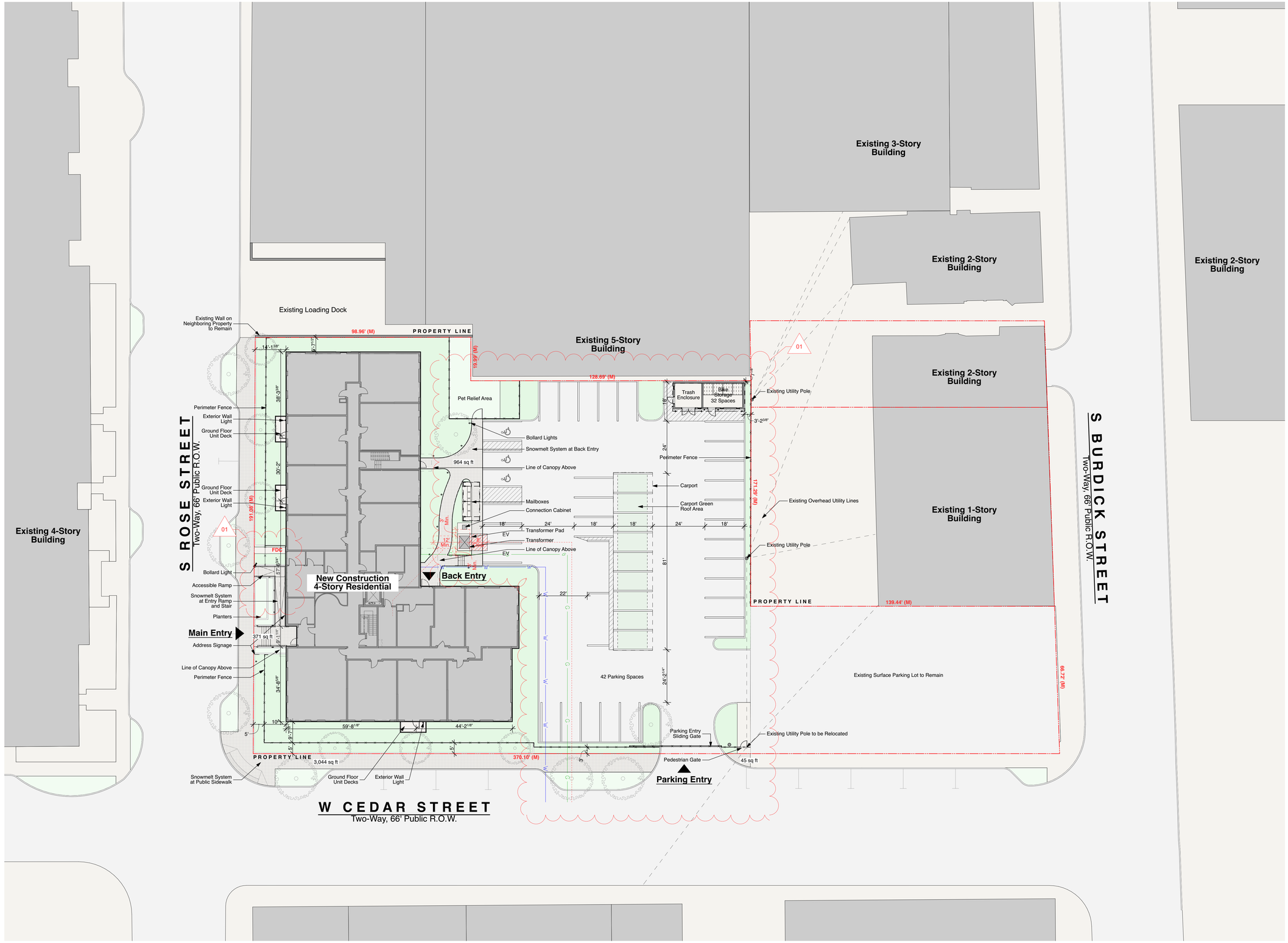
project number 252958

scale As Noted

date 6/3/26

sheet title Ground Floor Transparency Diagrams

sheet number A011



1 Site Plan

SCALE: 1" = 20' 0 10' 20' 40'

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Hinman Company / AVB Inc.

	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

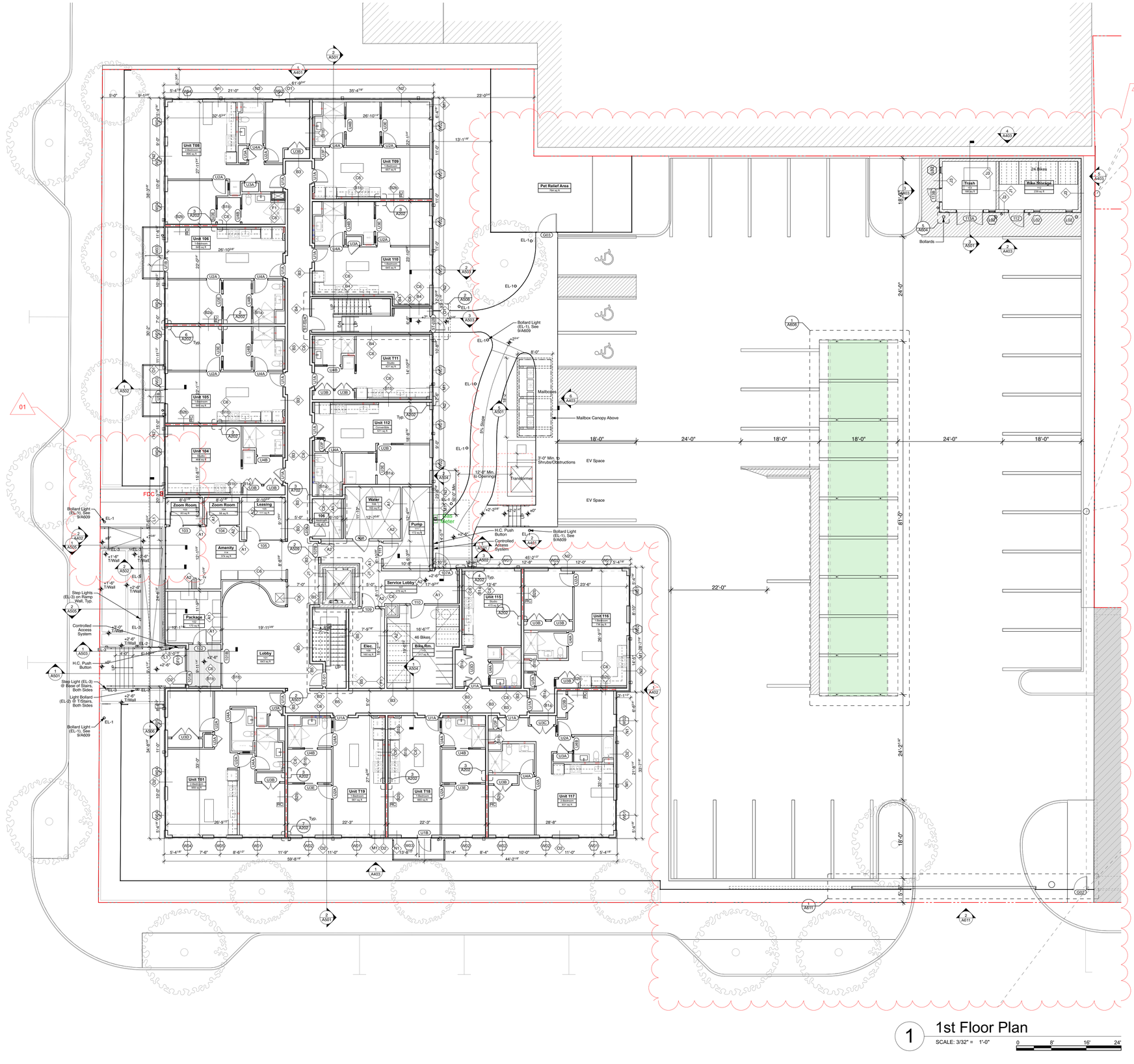
project number 252958

scale As Noted

date 6/3/26

sheet title Site Plan

sheet number A101



1 1st Floor Plan

SCALE: 3/32" = 1'-0"

0 8' 16' 24'

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GENERAL NOTES:

1. Typical Unit Interior Walls to be 'A1' Wall Type U.N.O. Refer to Wall Types Schedule on A301
2. Refer to Sheet A202 for Demising Wall Transition Details
3. Refer to Sheets A207 & A208 for Locations of Demising Wall Types
4. Refer to Sheets A209 to A212 for Interior Layout and Dimensions
5. Refer to Sheets A213 to A216 for Type B Unit Clearance Requirements
6. Refer to Sheet A219 for Type A Unit Clearance Requirements
7. Plumber to Set Shower & Tub Valve Locations Based on Plumbing/Wall Type and Tub & Shower Flange Dimensions - See Wall Types Sheet A301

HINMAN

avb

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431 S Rose
Kalamazoo, MI 49007
Hinman Company / AVB Inc.

	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

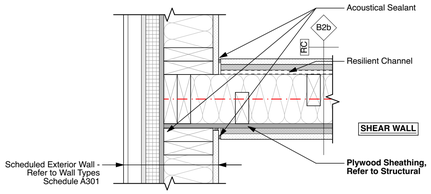
project number 252958

scale As Noted

date 6/3/26

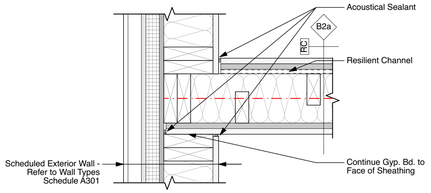
sheet title 1st Floor Plan

sheet number A201



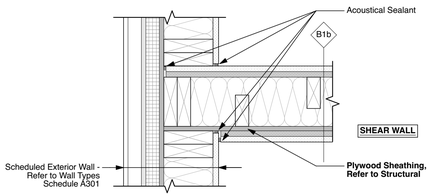
7 Demising to Exterior Shear Wall Detail - B2b

SCALE: 1 1/2"= 1'-0"



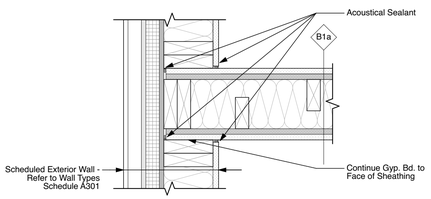
6 Demising to Exterior Wall Detail - B2a

SCALE: 1 1/2"= 1'-0"



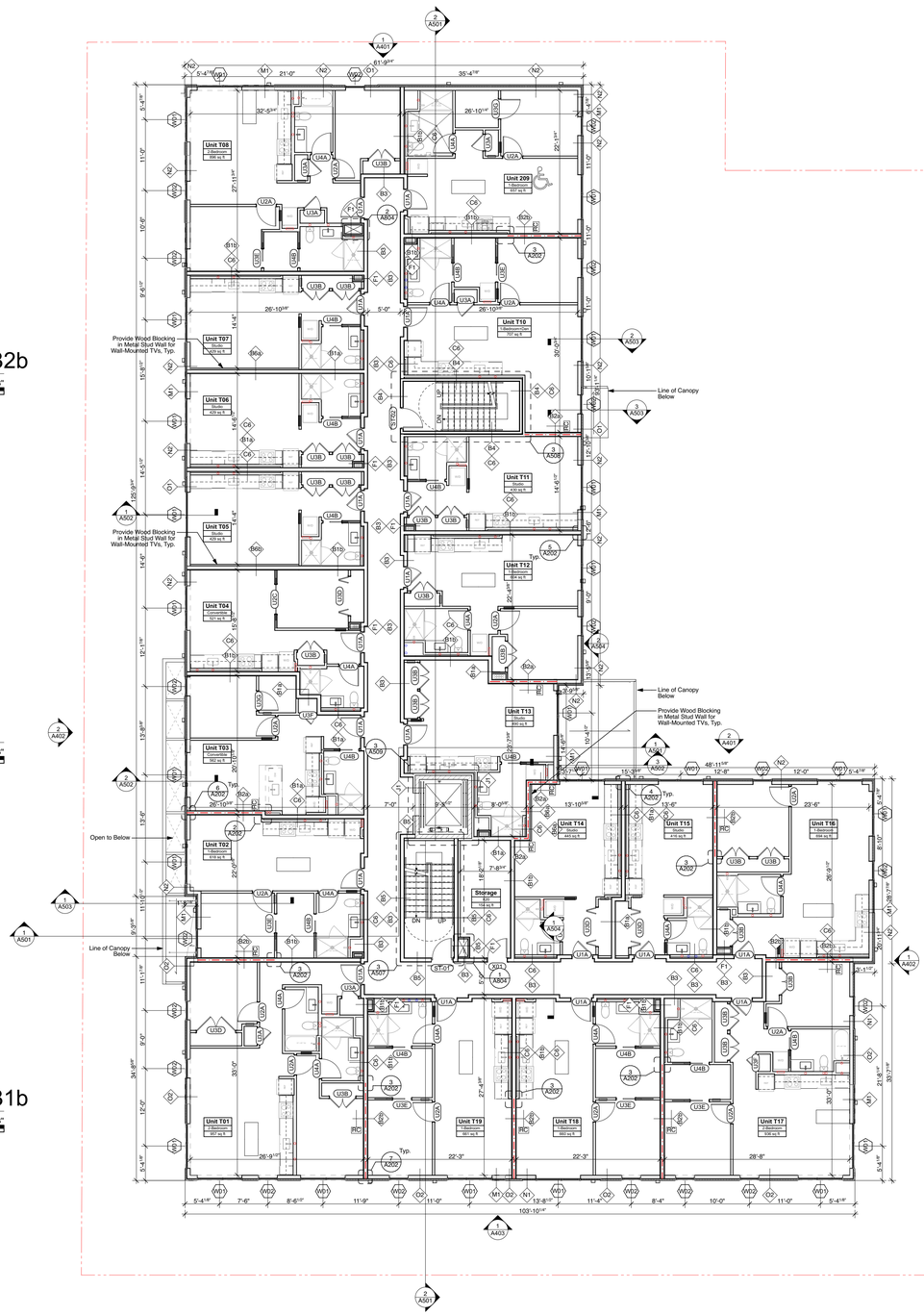
5 Demising to Exterior Shear Wall Detail - B1b

SCALE: 1 1/2"= 1'-0"



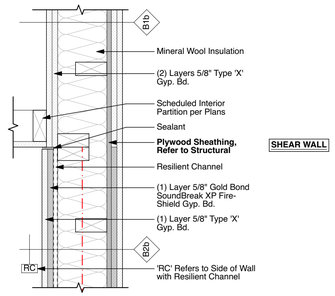
4 Demising to Exterior Wall Detail - B1a

SCALE: 1 1/2"= 1'-0"



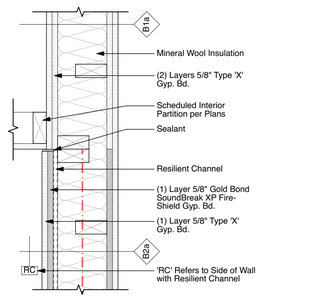
1 2nd Floor Plan

SCALE: 3/32" = 1'-0"



3 Typ. Demising Shear Wall Transition Detail

SCALE: 1 1/2"= 1'-0"



2 Typ. Demising Wall Transition Detail

SCALE: 1 1/2"= 1'-0"

GENERAL NOTES:

1. Typical Unit Interior Walls to be 'A1' Wall Type U.N.O. Refer to Wall Types Schedule on A301
2. Refer to Sheet A202 for Demising Wall Transition Details
3. Refer to Sheets A207 & A208 for Locations of Demising Wall Types
4. Refer to Sheets A209 to A212 for Interior Layout and Dimensions
5. Refer to Sheets A213 to A216 for Type B Unit Clearance Requirements
6. Refer to Sheet A219 for Type A Unit Clearance Requirements
7. Plumber to Set Shower & Tub Valve Locations Based on Plumbing/Wall Type and Tub & Shower Flange Dimensions - See Wall Types Sheet A301

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avb

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431 S Rose
Kalamazoo, MI 49007
Hinman Company / AVB Inc.

	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

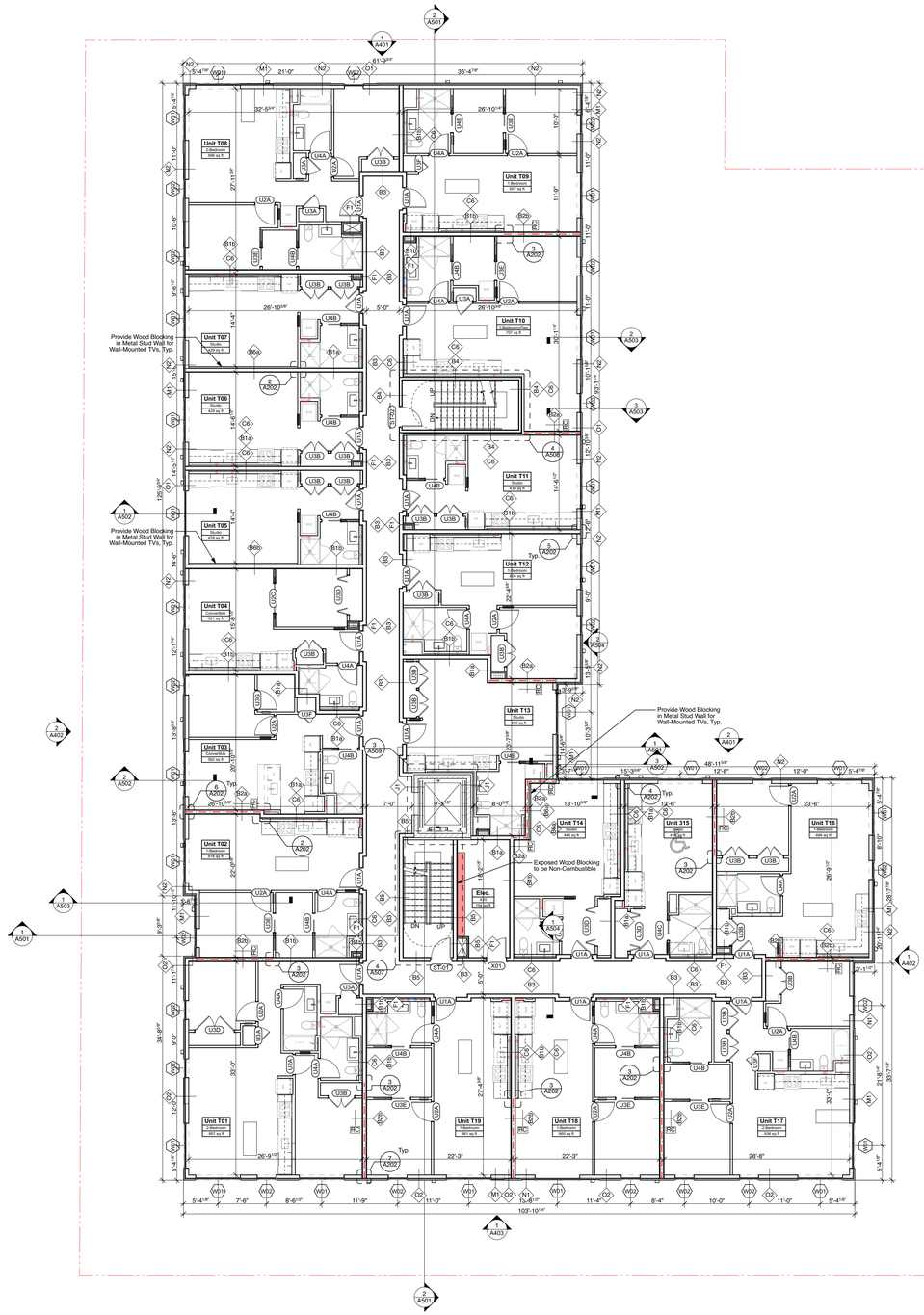
project number 252958

scale As Noted

date 6/3/26

sheet title 2nd Floor Plan

sheet number A202



1 3rd Floor Plan

SCALE: 3/32" = 1'-0"

0 8' 16' 24'

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GENERAL NOTES:

1. Typical Unit Interior Walls to be 'A1' Wall Type U.N.O. Refer to Wall Types Schedule on A301
2. Refer to Sheet A202 for Demising Wall Transition Details
3. Refer to Sheets A207 & A208 for Locations of Demising Wall Types
4. Refer to Sheets A209 to A212 for Interior Layout and Dimensions
5. Refer to Sheets A213 to A216 for Type B Unit Clearance Requirements
6. Refer to Sheet A219 for Type A Unit Clearance Requirements
7. Plumber to Set Shower & Tub Valve Locations Based on Plumbing/Wall Type and Tub & Shower Flange Dimensions - See Wall Types Sheet A301

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	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

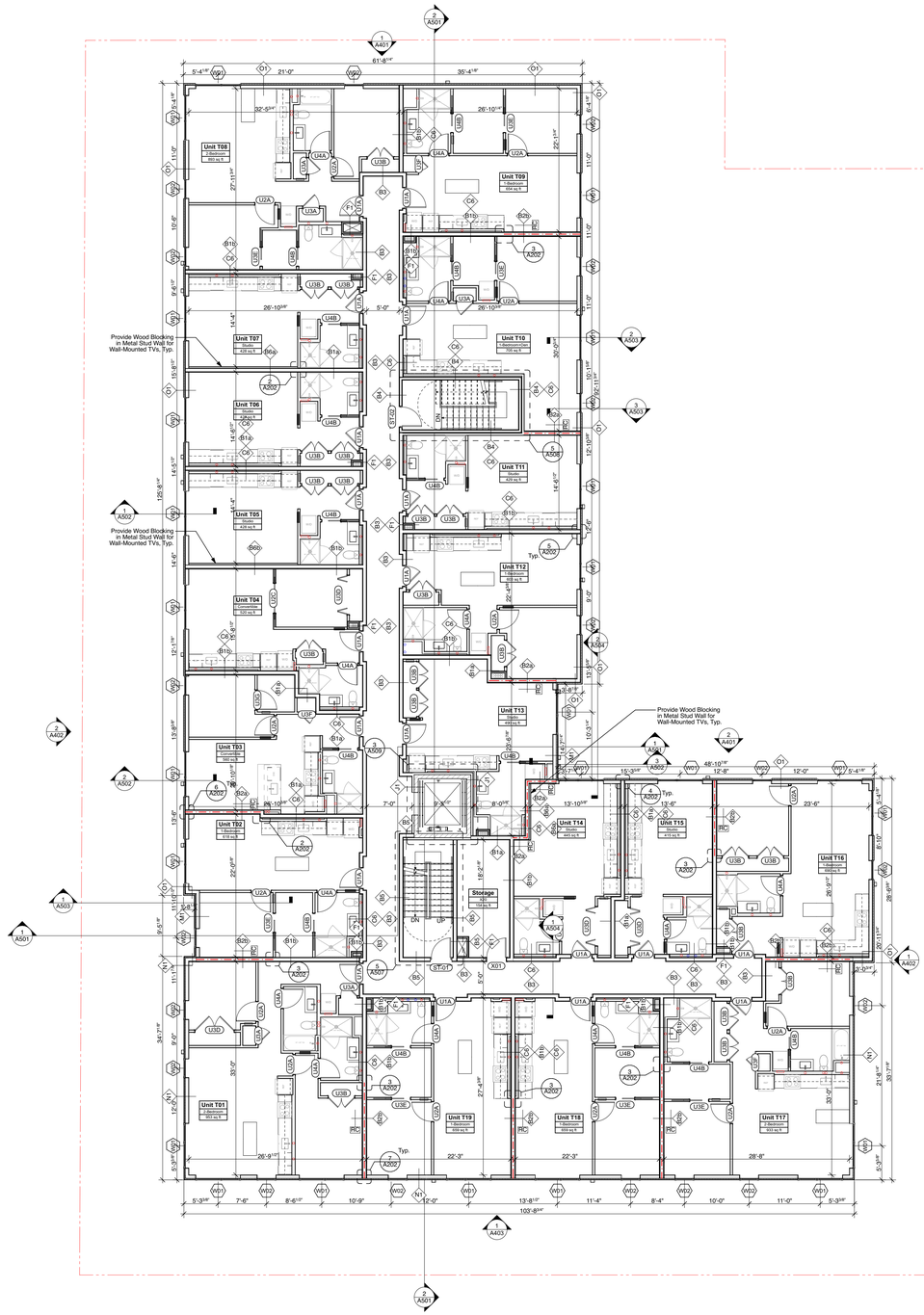
project number 252958

scale As Noted

date 6/3/26

sheet title 3rd Floor Plan

sheet number A203



1 4th Floor Plan

SCALE: 3/32" = 1'-0"

0 8' 16' 24'

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orientation

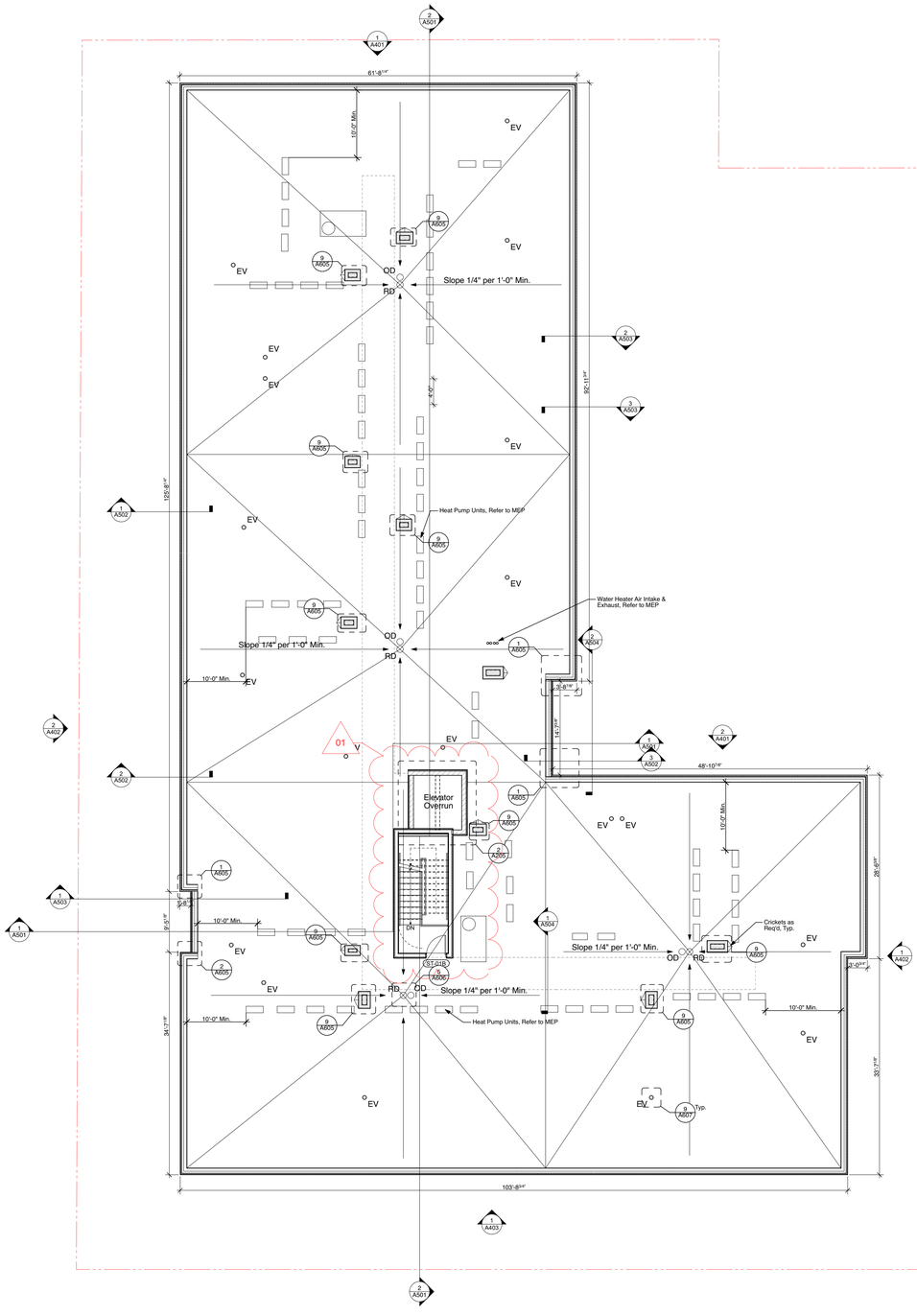
project number 252958

scale As Noted

date 6/3/26

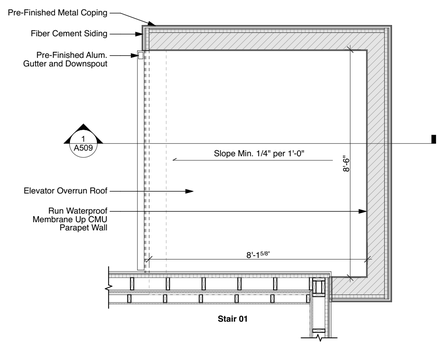
sheet title 4th Floor Plan

sheet number A204



Legend:

- Heat Pump Unit - Refer to MEP
- Ventilation Shaft Roof Pop-Up
- EV — Exhaust Vents - See MEP
- RD — Roof Drain
- OD — Overflow Drain



2 Elevator Overrun Roof Plan

SCALE: 3/8" = 1'-0"

1 Roof Plan

SCALE: 3/32" = 1'-0"

Note:
1. Fall Protection Provided by Others.

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orientation

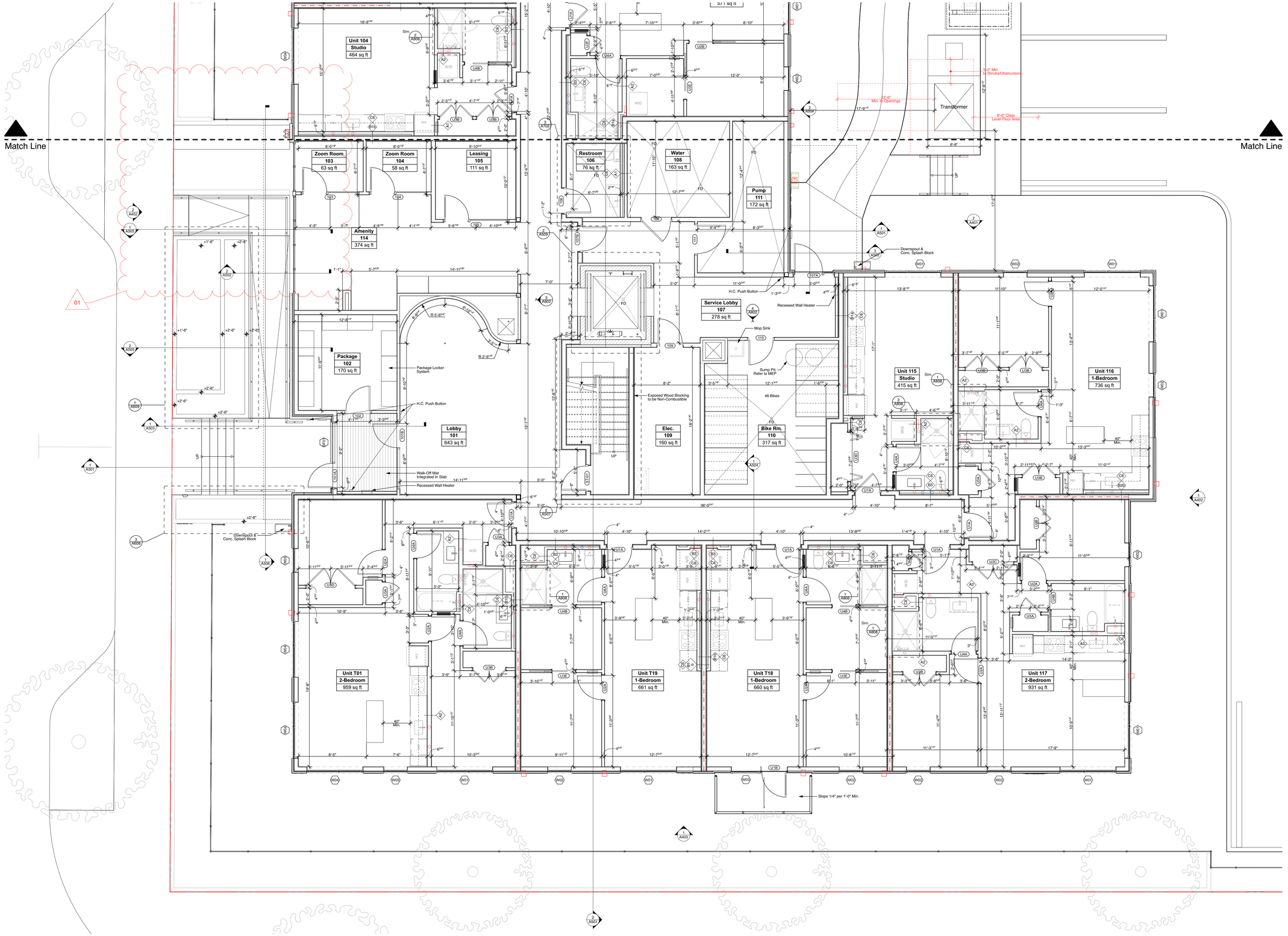
project number 252958

scale As Noted

date 6/3/26

sheet title Roof Plan

sheet number A205



Legend:

- Unit Electrical Panelboard - Refer to MEP
- Unit Media Panel - Refer to MEP

1 Enlarged 1st Floor Plan

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

0 4' 8' 12'

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orientation

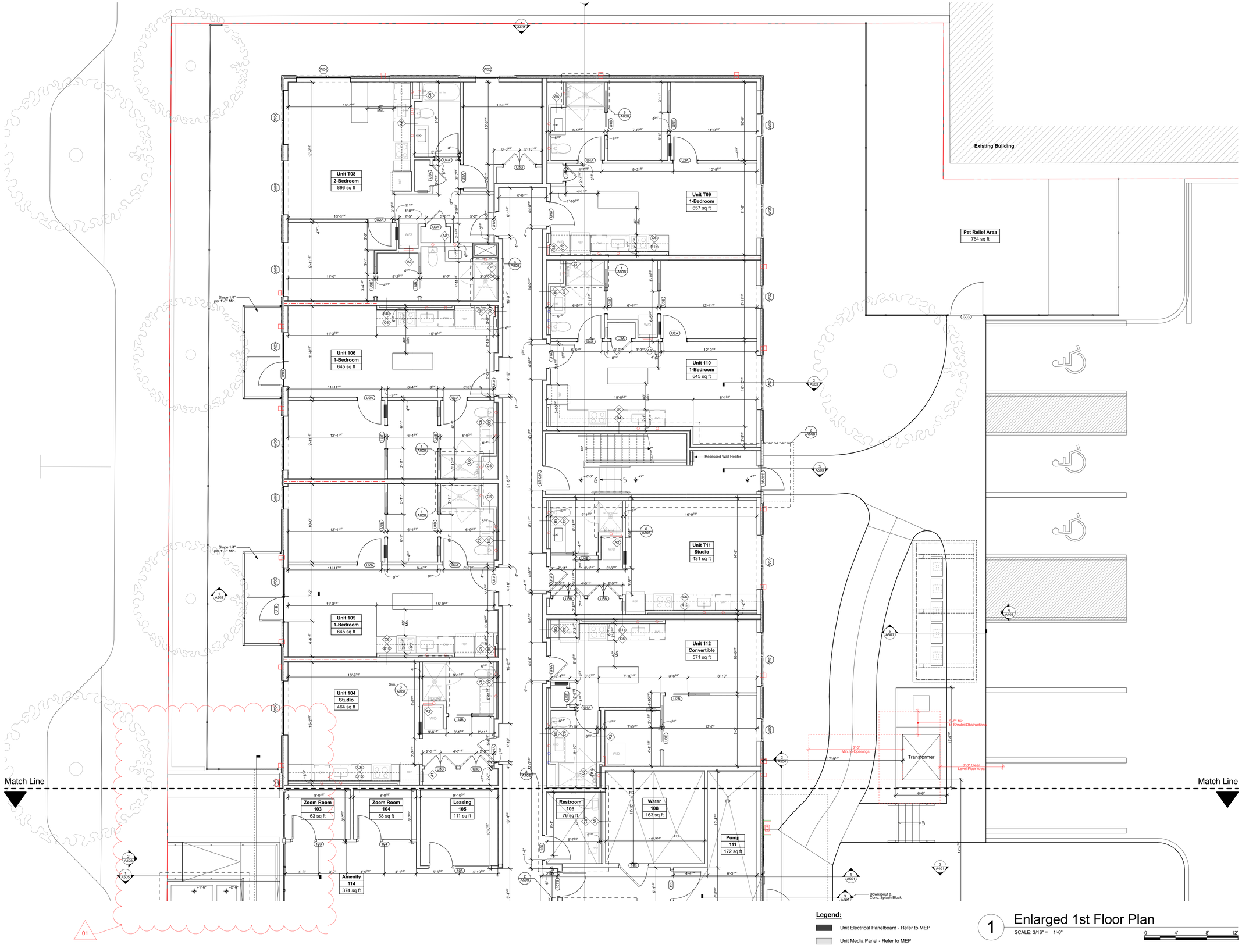
project number 252958

scale As Noted

date 6/3/26

sheet title Enlarged 1st Floor Plan

sheet number A209



Legend:

- Unit Electrical Panelboard - Refer to MEP
- Unit Media Panel - Refer to MEP

1 Enlarged 1st Floor Plan

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

0 4' 8' 12'

01

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	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

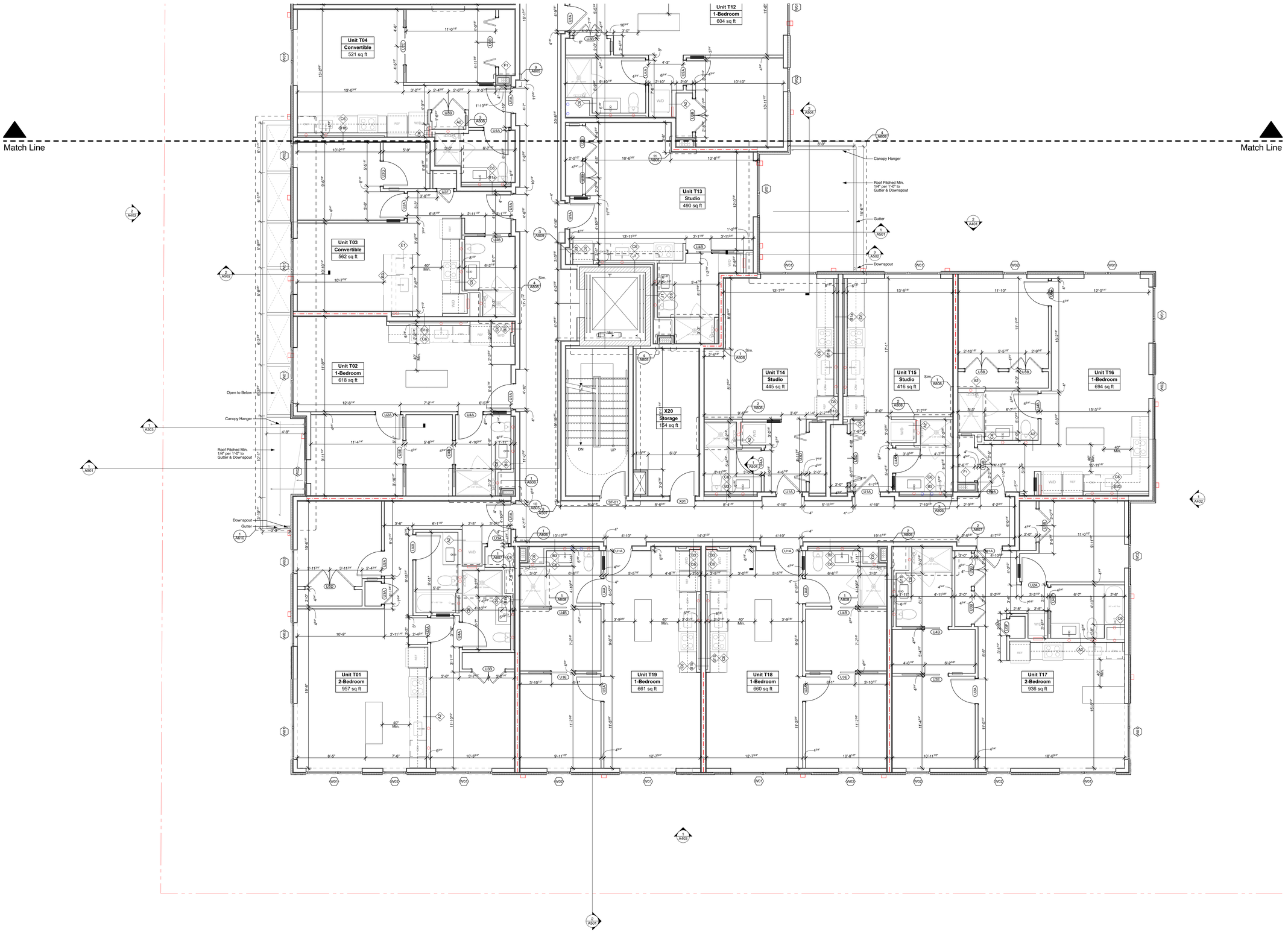
project number 252958

scale As Noted

date 6/3/26

sheet title Enlarged 1st Floor Plan

sheet number A210



Legend:

- Unit Electrical Panelboard - Refer to MEP
- Unit Media Panel - Refer to MEP

1 Enlarged 2nd-4th Floor Plan, Typ.

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

0 4' 8' 12'

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	06/03/26	Issue for Site Plan Review

orientation

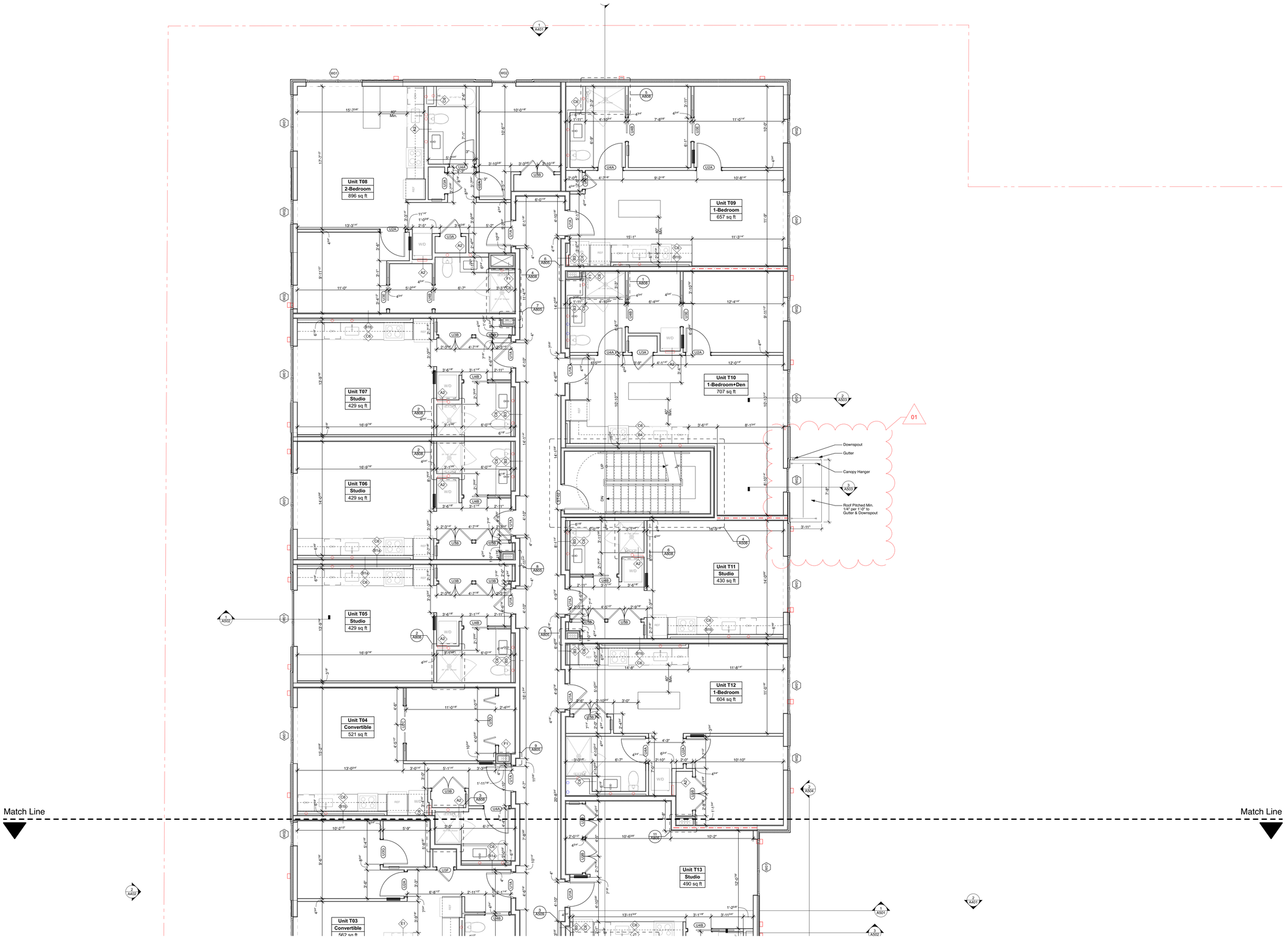
project number 252958

scale As Noted

date 6/3/26

sheet title Enlarged 2nd-4th Floor Plan, Typ.

sheet number A211



Legend:

- Unit Electrical Panelboard - Refer to MEP
- Unit Media Panel - Refer to MEP

1 Enlarged 2nd-4th Floor Plan, Typ.

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

0 4' 8' 12'

GENERAL NOTES:

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2. Refer to Sheet A202 for Demising Wall Transition Details
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	date	description
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	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

project number 252958

scale As Noted

date 6/3/26

sheet title Enlarged 2nd-4th Floor Plan, Typ.

sheet number A212

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Material Legend	
1	EIFS - Color by Architect
2	Metal Siding - Color by Architect
3	Composite Siding - Color by Architect
4	Face Brick - Color by Architect
5	Hardie Board Siding - Color by Architect
6	Prefinished Scheduled Window System
7	Prefinished Scheduled Balcony Door
8	Prefinished Scheduled Storefront System
9	Prefinished Alum. Coping
10	Perimeter Fence
11	Building Address/Signage
12	Canopy
13	Planters
14	Deck Railing
15	Screen Wall
16	Pedestal Mailboxes - Finish TBD
17	Transformer
18	Exhaust & Intake Vents, Color to Match Adjacent Cladding
19	Gas Meter
20	Mailbox Canopy
21	Prefinished Alum. Downspout & Conc. Splash Block
22	Concrete Foundation, Refer to Structural
23	Existing Conc. Retaining Wall - Protect During Construction as Req'd.
24	Dog Run Fence
25	Exterior Wall Light
26	Bollard Light
27	Prefinished Alum. Handrail

01

2 Building Elevation - North 02

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

0 4' 8' 16'

1 Building Elevation - North 01

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

0 4' 8' 16'

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	date	description
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	06/03/26	Issue for Site Plan Review

orientation

project number 252958

scale As Noted

date 6/3/26

sheet title Building Elevations

sheet number A401

2 Building Elevation - West

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

0 4' 8' 16'

1 Building Elevation - East

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

0 4' 8' 16'

Material Legend	
1	EIFS - Color by Architect
2	Metal Siding - Color by Architect
3	Composite Siding - Color by Architect
4	Face Brick - Color by Architect
5	Hardie Board Siding - Color by Architect
6	Prefinished Scheduled Window System
7	Prefinished Scheduled Balcony Door
8	Prefinished Scheduled Storefront System
9	Prefinished Alum. Coping
10	Perimeter Fence
11	Building Address/Signage
12	Canopy
13	Planters
14	Deck Railing
15	Screen Wall
16	Pedestal Mailboxes - Finish TBD
17	Transformer
18	Exhaust & Intake Vents, Color to Match Adjacent Cladding
19	Gas Meter
20	Mailbox Canopy
21	Prefinished Alum. Downspout & Conc. Splash Block
22	Concrete Foundation, Refer to Structural
23	Existing Conc. Retaining Wall - Protect During Construction as Req'd.
24	Dog Run Fence
25	Exterior Wall Light
26	Bollard Light
27	Prefinished Alum. Handrail

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	date	description
	10/01/25	Schematic Design
	01/12/26	Design Development
	03/24/26	Issue for GMP
	06/03/26	Issue for Site Plan Review

orientation

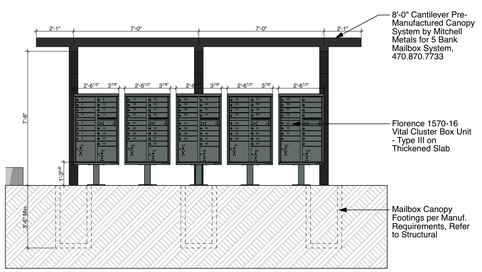
project number 252958

scale As Noted

date 6/3/26

sheet title Building Elevations

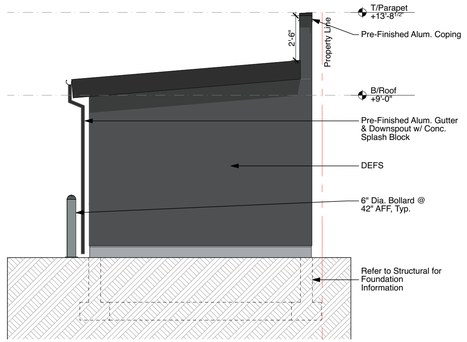
sheet number A402



6 Mailbox Elevation

SCALE: 1/4" = 1'-0"

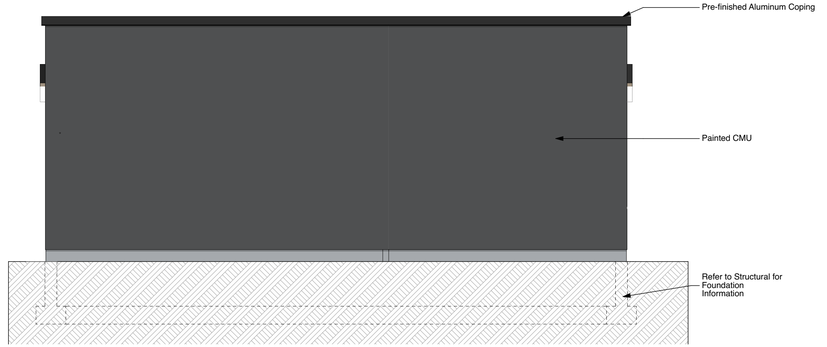
0 2' 4' 8'



5 Trash/Bike Storage - East Elevation

SCALE: 1/4" = 1'-0"

0 2' 4' 8'



4 Trash/Bike Storage - North Elevation

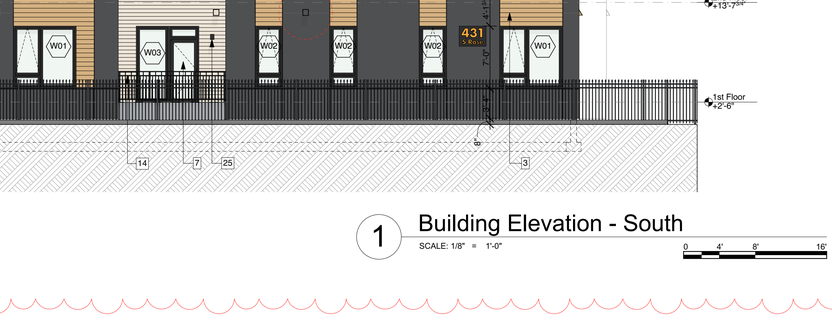
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

3 Trash/Bike Storage - West Elevation

SCALE: 1/4" = 1'-0"

0 2' 4' 8'



2 Trash/Bike Storage - South Elevation

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

Material Legend	
1	EIFS - Color by Architect
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4	Face Brick - Color by Architect
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23	Existing Conc. Retaining Wall - Protect During Construction as Req'd.
24	Dog Run Fence
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26	Bollard Light
27	Prefinished Alum. Handrail

1 Building Elevation - South

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

0 4' 8' 16'

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orientation

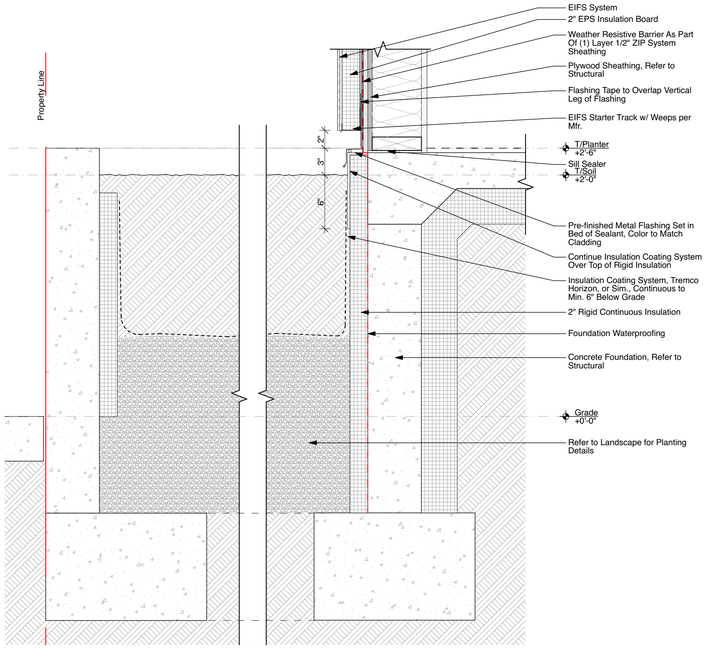
project number 252958

scale As Noted

date 6/3/26

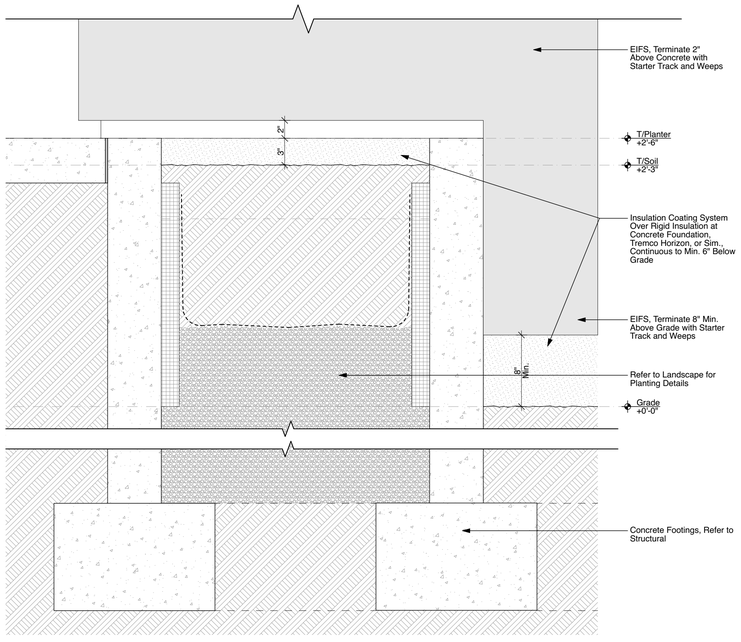
sheet title Building Elevations

sheet number A403



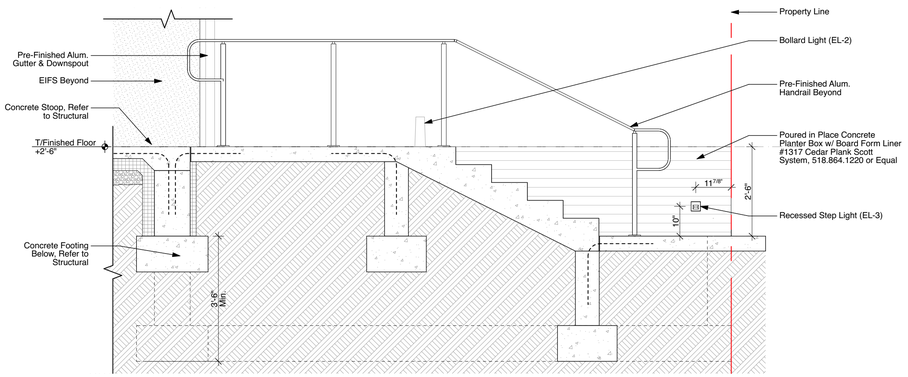
7 Entry Planter 01 - E-W Section

SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



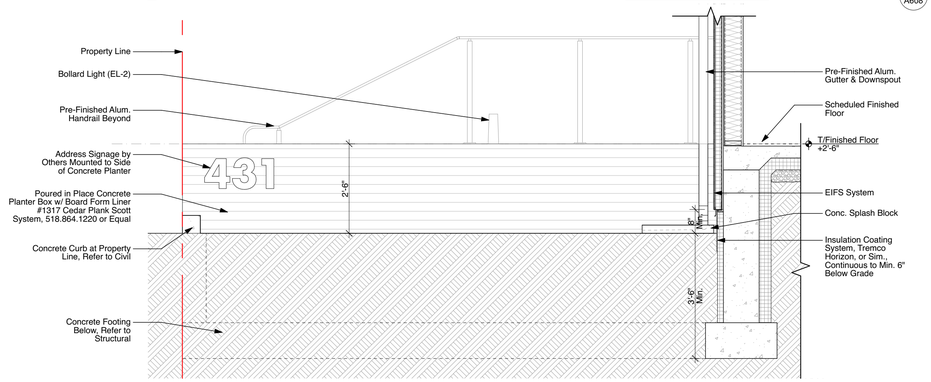
6 Entry Planter 01 - N-S Section

SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



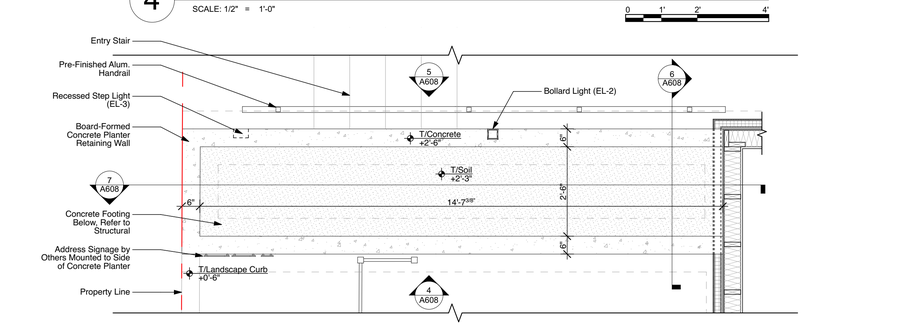
5 Entry Planter 01 - North Elevation

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



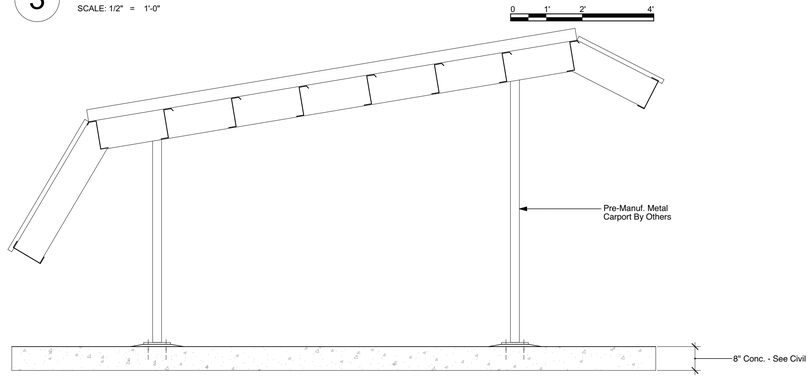
4 Entry Planter 01 - South Elevation

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



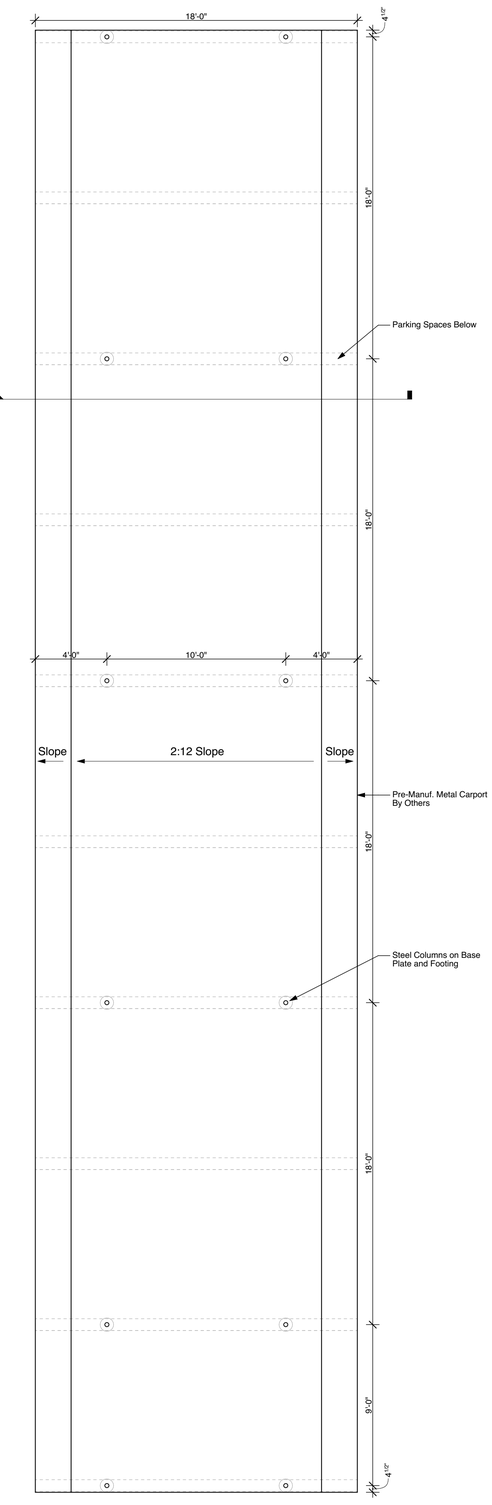
3 Entry Planter 01 - Plan Detail

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



2 Carport Section

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



1 Carport Plan Detail

SCALE: 1/4" = 1'-0" 0 2' 4' 8'

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orientation

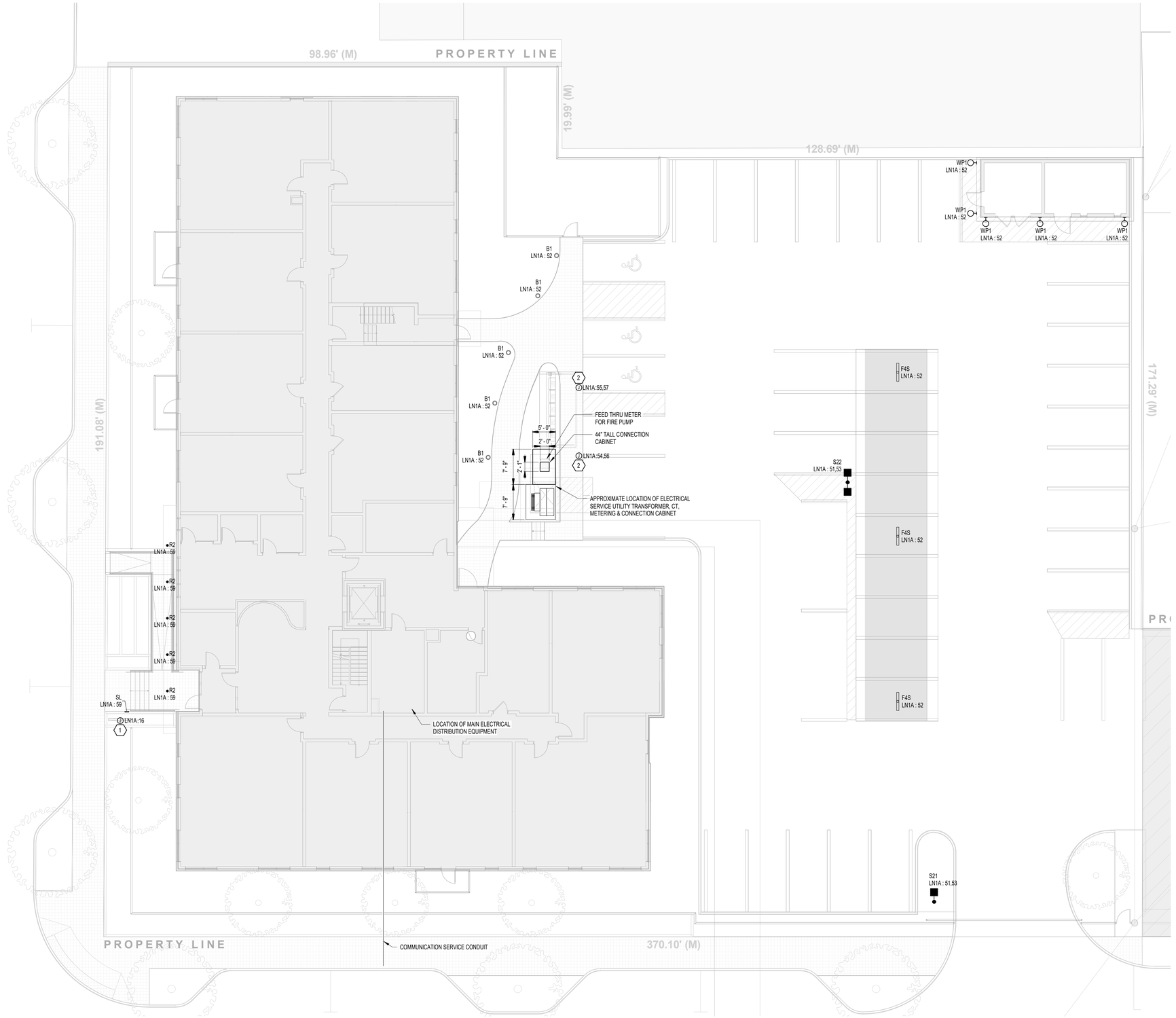
project number 252958

scale As Noted

date 6/3/26

sheet title Exterior Details

sheet number A608



1 ELECTRICAL SITE PLAN

3/32" = 1'-0"

KEYED NOTES

1. BUILDING SIGN - PROVIDE 20A, 120V CONNECTION. VERIFY FINAL LOCATION WITH ARCHITECT.
2. EV CHARGERS - PROVIDE 40A, 208V-1PH DEDICATED CONNECTION.

CTa
SUSTAINABLE MEP ENGINEERING
3433 BROADWAY STREET NE – SUITE 475, MINNEAPOLIS, MN 55413
MAIN: 612.279.4200 || FAX: 612.279.4201 || www.ctamep.com

PAPPAGEORGE HAYMES

I Hereby Certify That This Plan, Specification or Report Was Prepared By Me or Under My Direct Supervision and That I Am a Duly Licensed Professional Engineer Under the Laws of the State of Minnesota.

JAY J. CAIN REG. NO. 12637
DATE: 03/23/2026

Issues and Revisions:

#	DATE	DESCRIPTION
	11/25/2025	PROGRESS SET
	12/19/2025	DD SET
	03/23/2026	Issue for GMP

431 S ROSE
KALAMAZOO, MI

PROJECT NUMBER:	2025-149
DRAWN BY:	KJK
CHECKED BY:	JJC
PACKAGE DESCRIPTION	
ISSUE DATE:	03/23/2026

ELECTRICAL SITE PLAN

SHEET

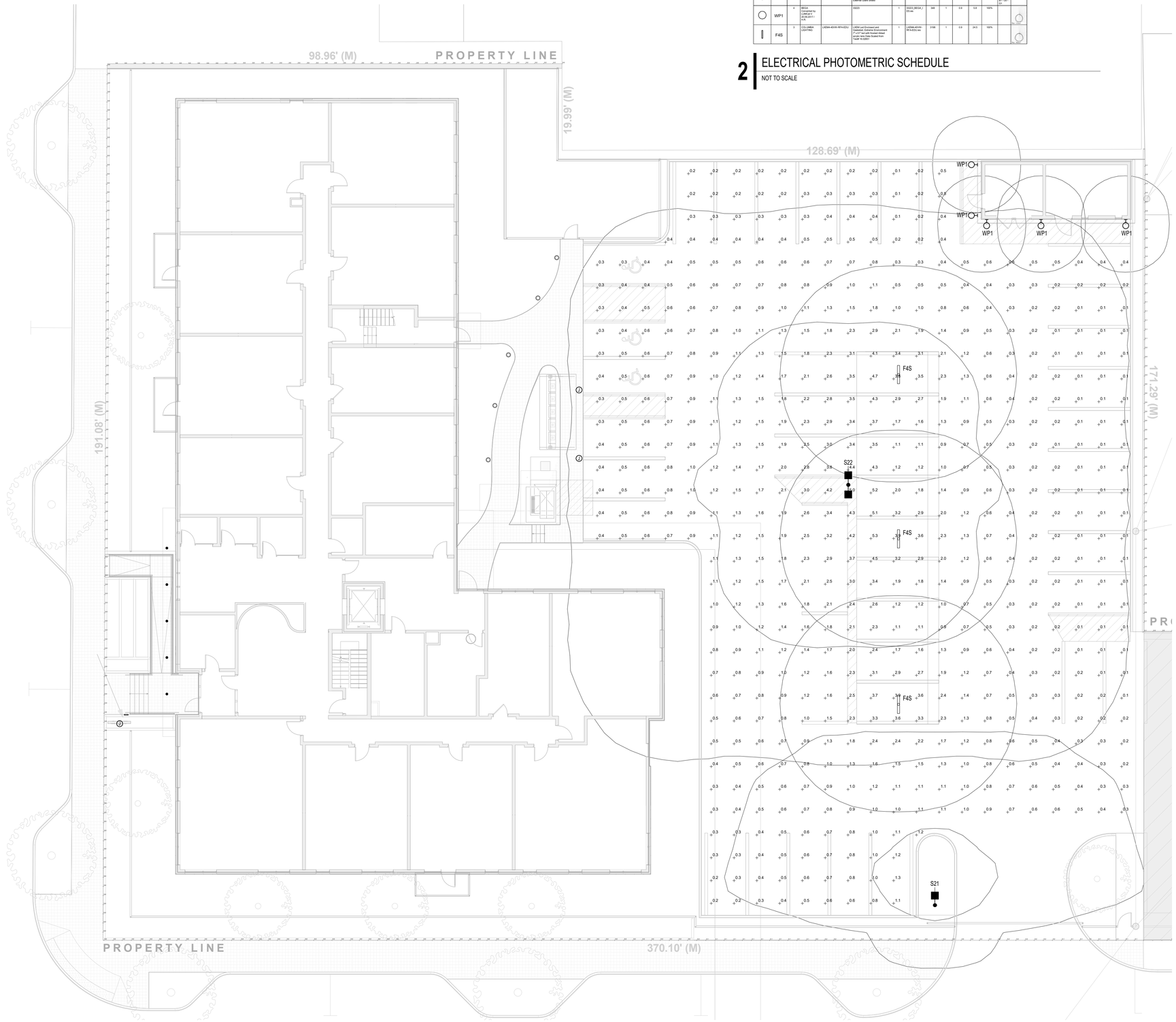
E100

Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	
Parking Lot	+	1.0 fc	5.3 fc	0.1 fc	53.0:1	10.0:1	
Property Line	+	0.1 fc	0.6 fc	0.0 fc	MN	N/A	

Schedule													
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Number Lamps	Filename	Lumens per Lamp	Lumen Multiplier	LLF	Wattage	Efficiency	Construction	Polar Plot
	S22	1	Lithonia Lighting	DSXO LED P7C 40K TSCRS T-Mod-HS	D-Series Size 0 Area Luminaire P7 Performance Package 4000K CCT Type IV Scrub Medium Houseside Shield	1	DSXO_LED_P7C_40K_TSCRS_T-Mod-HS.ies	21000	1	0.9	137.8	152%	TYPE IV, MEDIUM, CUT-OFF, REFRACTIVE, IES - UP, IES - LO	
	S21	1	Lithonia Lighting	DSXO LED P2 40K TSCRS T-Mod-HS ELA-LF	D-Series Size 0 Area Luminaire P2 Performance Package 4000K CCT Type IV Scrub Medium Houseside Shield Forward External Glare Shield	1	DSXO_LED_P2_40K_TSCRS_T-Mod-HS_ELA-LF.ies	3153	1	0.9	45.16	152%	TYPE IV, MEDIUM, CUT-OFF, REFRACTIVE, IES - UP, IES - LO	
	WP1	4	BEGA Lichtwerkzeuge für Architektur und Design seit 1911 - o.A.	33223	33223	1	33223_BEGA_1_EE.ies	348	1	0.9	6.8	152%		No Data
	F4S	3	COLUMBIA LIGHTING	LAE94-40/IV-RFA-EDU	LAE94 Led Enclosed and Gasketed, Extreme Environment 94 CRI, 4000K CCT, Type IV with Vertical Glare Guard from Yardlit 10.02851	1	LAE94-40/IV-RFA-EDU.ies	3198	1	0.9	24.5	152%		No Data

2 ELECTRICAL PHOTOMETRIC SCHEDULE

NOT TO SCALE



1 ELECTRICAL PHOTOMETRIC PLAN

3/32" = 1'-0"

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3433 BROADWAY STREET NE – SUITE 475, MINNEAPOLIS, MN 55413
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PAPPAGEORGE HAYMES

I Hereby Certify That This Plan, Specification or Report Was Prepared By Me or Under My Direct Supervision and That I Am a Duly Licensed Professional Engineer Under the Laws of the State of Minnesota.

JAY J. CAIN REG. NO. 12637
DATE: 03/23/2026

Issues and Revisions:

#	DATE	DESCRIPTION
	11/25/2025	PROGRESS SET
	12/19/2025	DD SET
	03/23/2026	Issue for GMP

431 S ROSE
KALAMAZOO, MI

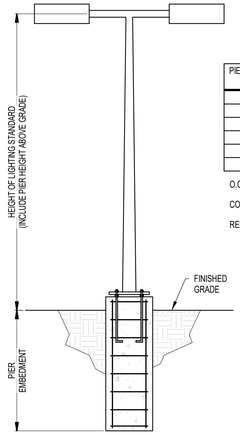
PROJECT NUMBER:	2025-149
DRAWN BY:	KJK
CHECKED BY:	JJC
PACKAGE DESCRIPTION	
ISSUE DATE:	03/23/2026

ELECTRICAL PHOTOMETRIC PLAN

SHEET

E150

HEIGHT OF STANDARD (FEET)	AREA OF LUMINAIRE(S) PRESENTED TO WIND (SQ. FT)	EQUIVALENT FORCE AT TOP OF STANDARD (LBS)	PIER DIAMETER (INCHES)	PIER EMBEDMENT (FEET-INCHES)
14	2	120	16	4'-0"
	3	150	16	4'-3"
	4	180	16	4'-6"
16	2	120	16	4'-3"
	3	150	16	4'-6"
	4	180	16	4'-9"
18	3	150	18	4'-6"
	4	180	18	4'-9"
	5	220	18	5'-0"
20	4	180	18	5'-0"
	5	220	18	5'-3"
	6	260	18	5'-6"
22	5	220	18	5'-6"
	6	260	20	5'-6"
	7	310	20	5'-9"
24	6	260	20	5'-9"
	7	310	24	5'-9"
	8	360	24	6'-0"
26	6	260	24	5'-6"
	7	310	24	5'-9"
	8	360	24	6'-0"
28	7	310	24	6'-0"
	8	360	24	6'-3"
	9	410	24	6'-6"
30	8	360	24	6'-6"
	9	410	24	6'-9"
	10	520	24	7'-0"
35	8	360	24	7'-0"
	10	520	30	7'-0"
	12	620	30	7'-6"
	14	710	30	7'-9"
40	10	520	30	7'-3"
	12	620	30	7'-9"
	14	710	36	7'-6"
	16	800	36	8'-0"



PIER DIAMETER (INCHES)	VERTICAL BARS (QTY & SIZE)	HORIZONTAL TIES (SIZE & SPACING)
16	(4) #5	#3 @ 10" O.C.
18	(4) #6	#3 @ 12" O.C.
20	(4) #6	#3 @ 12" O.C.
24	(4) #6	#3 @ 12" O.C.
30	(4) #7	#3 @ 14" O.C.
36	(4) #8	#3 @ 16" O.C.

O.C. = ON CENTER

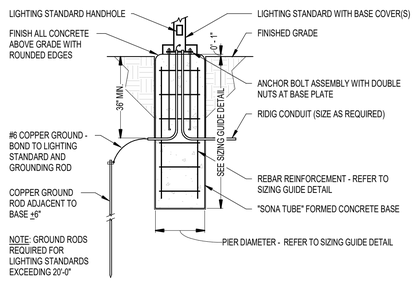
CONCRETE = 3,000 PSI

REBAR - 60,000 PSI (ASTM A615 GRADE 60

SIZING GUIDE ASSUMPTION:
SITE HAS GOOD GRANULAR SOILS.
IF SOILS ARE QUESTIONABLE, PROJECT STRUCTURAL ENGINEER WILL NEED TO CONSULTED.

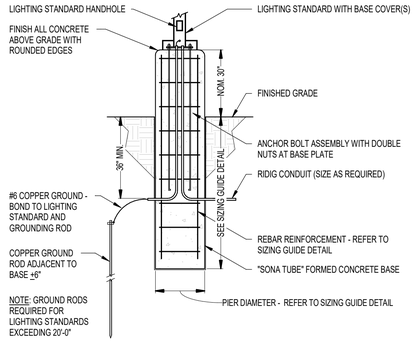
1 LIGHTING FOUNDATION SIZING GUIDE

NOT TO SCALE



3 LIGHTING ASSEMBLY FLUSH CONCRETE FOUNDATION

NOT TO SCALE



2 LIGHTING ASSEMBLY RAISED CONCRETE FOUNDATION

NOT TO SCALE

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JAY J. CAIN REG. NO. 12637
DATE: 03/23/2026

Issues and Revisions:

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	12/19/2025	DD SET
	03/23/2026	Issue for GMP

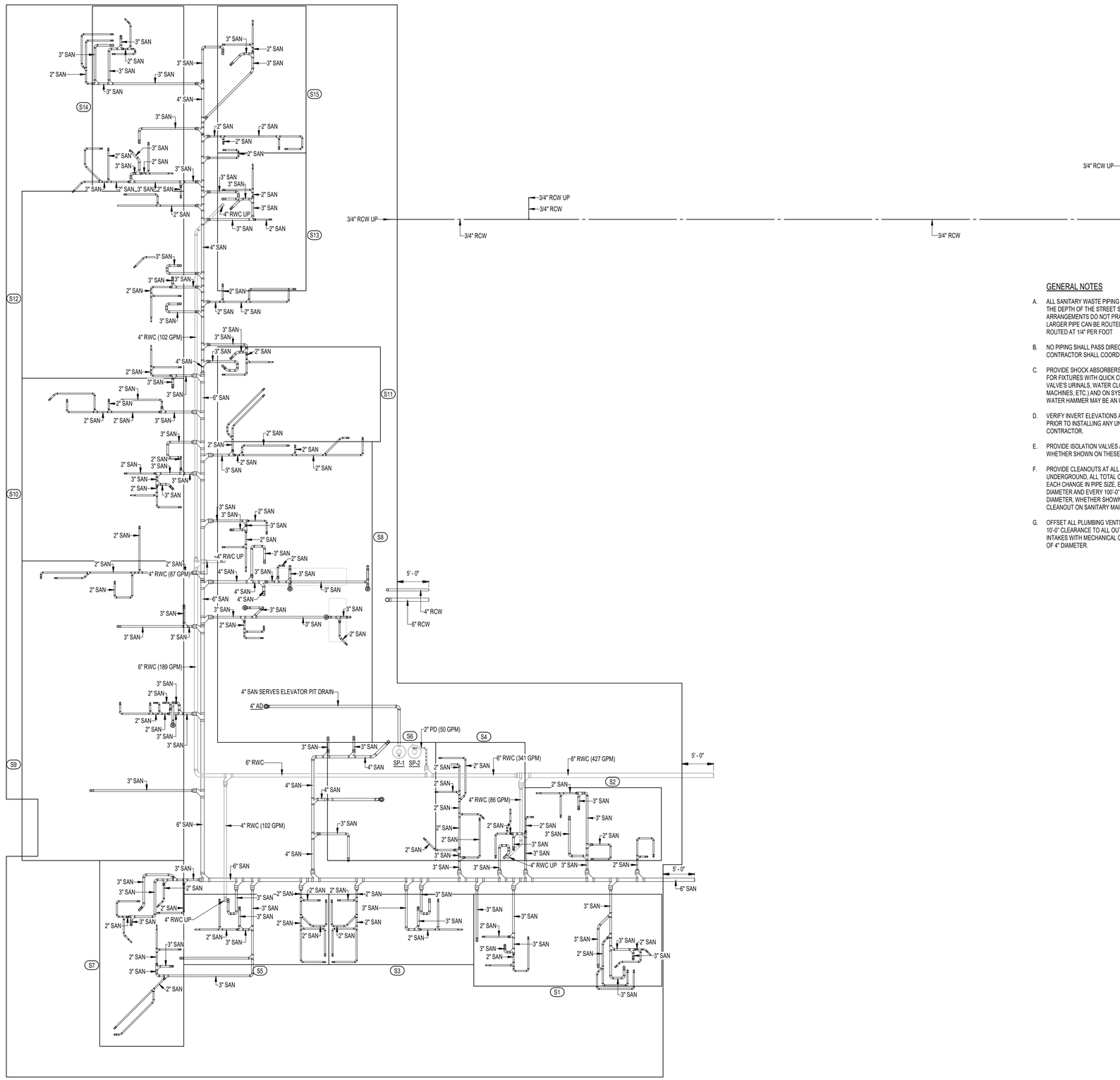
431 S ROSE
KALAMAZOO, MI

PROJECT NUMBER:	2025-149
DRAWN BY:	KJK
CHECKED BY:	JJC
PACKAGE DESCRIPTION	
ISSUE DATE:	03/23/2026

ELECTRICAL DETAILS

SHEET

E700



1 PLUMBING PLAN-Underground

1/8" = 1'-0"

GENERAL NOTES

A. ALL SANITARY WASTE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT, UNLESS THE DEPTH OF THE STREET SEWER, STRUCTURAL INTERFERENCES, OR OTHER BUILDING ARRANGEMENTS DO NOT PRACTICALLY ALLOW FOR 1/4" PER FOOT, THEN, A 4" OR LARGER PIPE CAN BE ROUTED AT A 1/8" PER FOOT; PIPES SMALLER THAN 4" SHALL BE ROUTED AT 1/4" PER FOOT

B. NO PIPING SHALL PASS DIRECTLY OVER ELECTRICAL POWER DISTRIBUTION CABINETS. CONTRACTOR SHALL COORDINATE PANEL LOCATIONS PRIOR TO PIPING INSTALLATION.

C. PROVIDE SHOCK ABSORBERS SIZED PER PDI STANDARD PDI-WH 201 WHERE REQUIRED FOR FIXTURES WITH QUICK CLOSING VALVES (INCLUDING BUT NOT LIMITED TO FLUSH VALVE'S URINALS, WATER CLOSETS, CLINIC SERVICE SINKS, DISHWASHERS, ICE MACHINES, ETC.) AND ON SYSTEMS WITH HIGHER THAN NORMAL PRESSURE WHERE WATER HAMMER MAY BE AN ISSUE.

D. VERIFY INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING ANY UNDERGROUND PIPING. COORDINATE WITH SITE UTILITY CONTRACTOR.

E. PROVIDE ISOLATION VALVES AT ALL BRANCH TAKE-OFF'S FROM DOMESTIC WATER MAINS, WHETHER SHOWN ON THESE DRAWINGS OR NOT.

F. PROVIDE CLEANOUTS AT ALL SANITARY AND STORM STACKS BEFORE TURNING UNDERGROUND, ALL TOTAL CHANGES OF DIRECTION GREATER THAN 90 DEGREES, AT EACH CHANGE IN PIPE SIZE, EVERY 50'-0" ON HORIZONTAL RUNS ON PIPING LESS THAN 3" DIAMETER AND EVERY 100'-0" ON HORIZONTAL RUNS FOR PIPING GREATER THAN 4" DIAMETER, WHETHER SHOWN ON THESE DRAWINGS OR NOT. PROVIDE BUILDING CLEANOUT ON SANITARY MAIN BEFORE LEAVING BUILDING.

G. OFFSET ALL PLUMBING VENTS THRU ROOF INSIDE BUILDING AS REQUIRED TO MAINTAIN 10'-0" CLEARANCE TO ALL OUTSIDE AIR INTAKES, COORDINATE LOCATION OF OUTSIDE AIR INTAKES WITH MECHANICAL CONTRACTOR. ALL VENTS THRU ROOF SHALL BE A MINIMUM OF 4" DIAMETER.

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SCOTT D. THOMAS REG. NO. 21659

DATE: 03/23/2026

Issues and Revisions:

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	11/25/2025	PROGRESS SET
	12/19/2025	DD SET
	03/23/2026	Issue for GMP

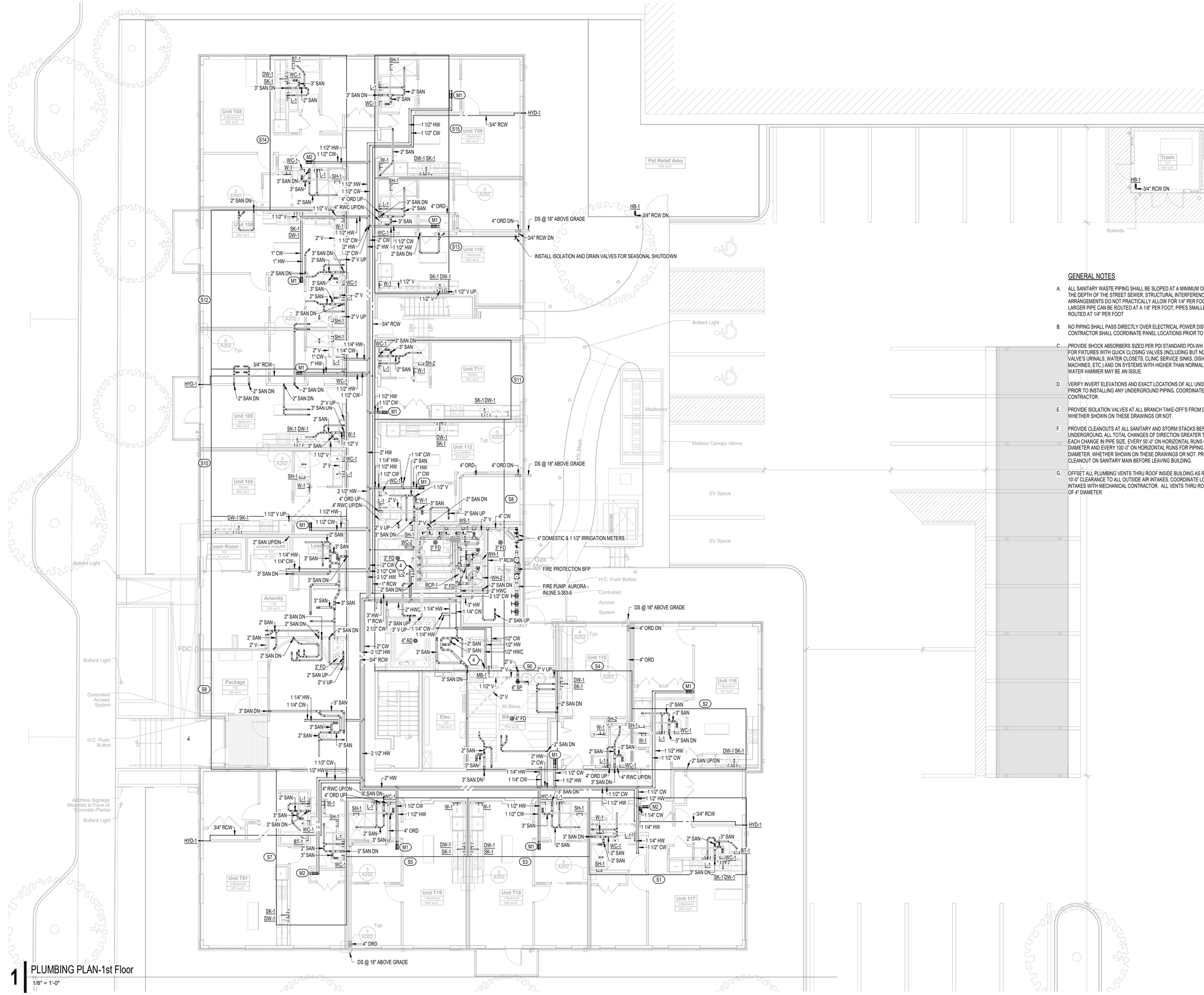
431 S ROSE
KALAMAZOO, MI

PROJECT NUMBER:	2025-149
DRAWN BY:	KDM
CHECKED BY:	SDT
PACKAGE DESCRIPTION	
ISSUE DATE:	03/23/2026

UNDERGROUND PLUMBING PLAN

SHEET

P010



1 PLUMBING PLAN-1st Floor
1/8" = 1'-0"

GENERAL NOTES

A. ALL SANITARY WASTE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT, UNLESS THE DEPTH OF THE STREET SEWER, STRUCTURAL INTERFERENCES, OR OTHER BUILDING ARRANGEMENTS DO NOT PRACTICALLY ALLOW FOR 1/4" PER FOOT, THEN, A 4" OR LARGER PIPE CAN BE ROUTED AT A 1/8" PER FOOT; PIPES SMALLER THAN 4" SHALL BE ROUTED AT 1/4" PER FOOT

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C. PROVIDE SHOCK ABSORBERS SIZED PER PDI STANDARD PDI-WH 201 WHERE REQUIRED FOR FIXTURES WITH QUICK CLOSING VALVES (INCLUDING BUT NOT LIMITED TO FLUSH VALVE'S URINALS, WATER CLOSETS, CLINIC SERVICE SINKS, DISHWASHERS, ICE MACHINES, ETC.) AND ON SYSTEMS WITH HIGHER THAN NORMAL PRESSURE WHERE WATER HAMMER MAY BE AN ISSUE.

D. VERIFY INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING ANY UNDERGROUND PIPING. COORDINATE WITH SITE UTILITY CONTRACTOR.

E. PROVIDE ISOLATION VALVES AT ALL BRANCH TAKE-OFF'S FROM DOMESTIC WATER MAINS, WHETHER SHOWN ON THESE DRAWINGS OR NOT.

F. PROVIDE CLEANOUTS AT ALL SANITARY AND STORM STACKS BEFORE TURNING UNDERGROUND, ALL TOTAL CHANGES OF DIRECTION GREATER THAN 90 DEGREES, AT EACH CHANGE IN PIPE SIZE, EVERY 50'-0" ON HORIZONTAL RUNS ON PIPING LESS THAN 3" DIAMETER AND EVERY 100'-0" ON HORIZONTAL RUNS FOR PIPING GREATER THAN 4" DIAMETER, WHETHER SHOWN ON THESE DRAWINGS OR NOT. PROVIDE BUILDING CLEANOUT ON SANITARY MAIN BEFORE LEAVING BUILDING.

G. OFFSET ALL PLUMBING VENTS THRU ROOF INSIDE BUILDING AS REQUIRED TO MAINTAIN 10'-0" CLEARANCE TO ALL OUTSIDE AIR INTAKES, COORDINATE LOCATION OF OUTSIDE AIR INTAKES WITH MECHANICAL CONTRACTOR. ALL VENTS THRU ROOF SHALL BE A MINIMUM OF 4" DIAMETER.

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SCOTT D. THOMAS REG. NO. 21659
DATE: 03/23/2026

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	03/23/2026	Issue for GMP

431 S ROSE
KALAMAZOO, MI

PROJECT NUMBER:	2025-149
DRAWN BY:	KDM
CHECKED BY:	SDT
PACKAGE DESCRIPTION	
ISSUE DATE:	03/23/2026

1ST FLOOR
PLUMBING PLAN

SHEET
P100

Plumbing Fixture Schedule

Type Mark	Description	Quantity	Type of Supply Control	Minimum Connection Size				Drainage Fixture Units		Water Supply Fixture Units						Notes
				CW	HW	San	Vent	DFU Each	DFU Total	CWFU Each	CWFU Total	HWFU Each	HWFU Total	Demand FU Each	Demand FU Total	
3" FD	3" FLOOR DRAIN	5	--	0"	0"	3"	2"	5	25	0	0	0	0	0	0	
4" AD	4" AREA DRAIN	1	--	0"	0"	4"	0"	6	6	0	0	0	0	0	0	
4" ERD	4" EMERGENCY ROOF DRAIN	4	--	0"	0"	4"	0"	0	0	0	0	0	0	0	0	
4" FD	4" FLOOR DRAIN	1	--	0"	0"	4"	2"	6	6	0	0	0	0	0	0	
4" RD	4" ROFF DRAIN	4	--	0"	0"	4"	0"	0	0	0	0	0	0	0	0	
4" SP	4" STAND PIPE	1	--	0"	0"	4"	2"	6	6	0	0	0	0	0	0	
BT-1	BATHTUB	12	MIXING VALVE	1/2"	1/2"	2"	1 1/2"	2	24	1	12	1	12	1.4	16.8	
DW-1	DISHWASHER	71	INTEGRAL	1/2"	1/2"	1 1/2"	1 1/4"	0	0	0	0	1.4	99.4	1.4	99.4	
HB-1	HOSE BIB	2	INTEGRAL	3/4"	0"	0"	0"	0	0	2	4	0	0	2	4	
HYD-1	WALL HYDRANT	4	INTEGRAL	3/4"	0"	0"	0"	0	0	2	8	0	0	2	8	
L-1	LAVATORY	81	FAUCET	1/2"	1/2"	2"	2"	1	81	0.5	40.5	0.5	40.5	0.7	56.7	1
L-1A	LAVATORY - ADA	2	FAUCET	1/2"	1/2"	2"	2"	1	2	0.5	1	0.5	1	0.7	1.4	1
L-2	LAVATORY	1	FAUCET	1/2"	1/2"	1 1/2"	1 1/2"	1	1	1.5	1.5	1.5	1.5	2	2	
MB-1	MOP BASIN	1	FAUCET	1/2"	1/2"	3"	1 1/2"	3	3	2.25	2.25	2.25	2.25	3	3	
SH-1	SHOWER	44	MIXING VALVE	1/2"	1/2"	2"	1 1/2"	2	88	1	44	1	44	1.4	61.6	
SH-2	SHOWER	25	MIXING VALVE	1/2"	1/2"	2"	1 1/2"	2	50	1	25	1	25	1.4	35	
SH-3	SHOWER - ADA ROLL-IN	2	MIXING VALVE	1/2"	1/2"	2"	1 1/2"	2	4	1	2	1	2	1.4	2.8	
SK-1	SINGLE COMPARTMENT SINK	69	FAUCET	1/2"	1/2"	2"	1 1/2"	2	138	1	69	1	69	1.4	96.6	
SK-1A	SINGLE COMPARTMENT SINK - ADA	2	FAUCET	1/2"	1/2"	2"	1 1/2"	2	4	1	2	1	2	1.4	2.8	
W-1	WASHING MACHINE BOX	71	INTEGRAL	1/2"	1/2"	2"	1 1/2"	2	142	1	71	1	71	1.4	99.4	
WC-1	WATER CLOSET	84	FLUSH TANK	3/4"	0"	3"	2"	3	252	2.2	184.8	0	0	2.2	184.8	
WC-2	WATER CLOSET	1	FLUSH TANK	3/4"	0"	4"	2"	3	3	2.2	2.2	0	0	2.5	2.5	
									835		469.25		369.65		676.8	

1. ONE OF THE LAVATORY SINKS WITHIN EACH APARTMENT SHALL RECEIVE CONDENSATE FROM THE FAN COIL. LAVATORY TAILPIECE SHALL HAVE A CONDENSATE CONNECTION, SEE MECHANICAL PLANS FOR LOCATION.

Sump Pump Schedule

Mark	Manufacturer	Model	Location	Type	Size	GPM	Head (ft)	RPM	Sump Basin Diameter (in)	Sump Basin Depth (in)	Electrical			Notes
											Voltage	Phase	HP	
SP-1	ZOELLER	137	BIKE ROOM	SUBMERSIBLE	2"	50	15	1750	24"	108"	120 V	1	1/2	SERVES ELEVATOR PIT DRAIN
SP-2	ZOELLER	137	BIKE ROOM	SUBMERSIBLE	2"	50	15	1750	24"	96"	120 V	1	1/2	SERVES ELEVATOR DRAIN TILE

Water Heater Schedule

Mark	Manufacturer	Model	Location	MBH Input	Gallons Storage	Gallons Recovery @ 100 Deg. Rise	Electrical				Notes
							Voltage	Phase	FLA	MOCP	
WH-1	AO SMITH	BTH-199	WATER ROOM	199.9	100	256	120 V	1			
WH-2	AO SMITH	BTH-199	WATER ROOM	199.9	100	256	120 V	1			

Water Softener Schedule

Mark	Manufacturer	Model	Location	GPM	P.D. at Design Flow	Grains Exch. Each Tank	Resin Cubic Ft Each Tank	Manif. Size	Backwash G.P.M.	Exch / Brine Tank			Electrical				Notes
										Number	Diameter	Height	Voltage	Phase	FLA	MOCP	
WS-1	WATER CONTROL	LF-360-TRIPLEX	WATER ROOM	171	7	276000	12	2"	25	3/1	30"/30"	91"/50"	120 V	1	1.3		

Recirculating Pump Schedule

Mark	Manufacturer	Model	Location	Type	Size	GPM	Head (ft)	RPM	Electrical			Notes
									Voltage	Phase	HP	
RCP-1	BELL & GOSSETT	ECOCIRC XL 36-45	WATER ROOM	HOT WATER RECIRC	2"	19.95	7.46	2800	120 V	1	1/6	

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SCOTT D. THOMAS REG. NO. 21659
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431 S ROSE
KALAMAZOO, MI

PROJECT NUMBER: 2025-149
DRAWN BY: KDM
CHECKED BY: SDT
PACKAGE DESCRIPTION
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PLUMBING SCHEDULES

SHEET
P400