SUMMIT ORCHARDS - LOTS 4E-2A & 4E-2B

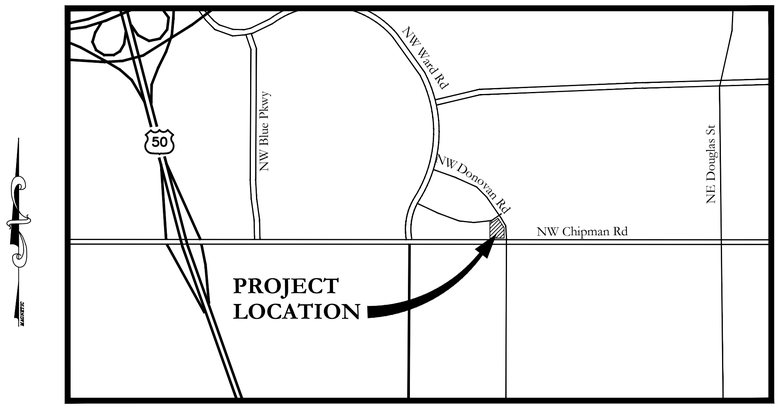
FINAL DEVELOPMENT PLANS

400 NW CHIPMAN ROAD
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
SEC. 31-48-31

SHEET LIST	
SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES & LEGEND
3A	EXISTING CONDITIONS
3B	PROPOSED MINOR PLAT
4	SITE PLAN
5	GRADING & EROSION CONTROL PLAN
6	GRADING PLAN - CUT & FILL
7	SPOT ELEVATION PLAN
8	SPOT ELEVATION PLAN
9	DRAINAGE AREA MAP & CALCS
10	UTILITY PLAN
11	UTILITY PROFILES
12	DETAILS
13	DETAILS
14	DETAILS
15	DETAILS
LS101	LANDSCAPE PLAN

SEE ADDITIONAL PLANS PREPARED BY OLSON ARCHITECTURAL GROUP ARCHITECTS AND SCHARHAG ARCHITECTS.

MCLAUGHLIN MUELLER INC HAS SOLE RESPONSIBILITY FOR SHEET 3A, HG CONSULT INC HAS SOLE RESPONSIBILITY FOR SHEET 3B, VSR DESIGN HAS SOLE RESPONSIBILITY FOR SHEET LS101



LOCATION MAP
NOT TO SCALE

LEGAL DESCRIPTION

LOTS 4E-2A & 4E-2B A REPLAT OF LOT 4E-2, SUMMIT ORCHARD, LOTS 4E-1 AND 4E-2 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

FLOOD NOTE

THIS PROPERTY DOES NOT LIE WITHIN A FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 29095C0417G. DATED 1/20/2017

OIL AND GAS WELL NOTE

THERE WAS NO OIL OR GAS WELLS LOCATED ON PROPERTY PER MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS PERMITS WEBSITE.

UTILITIES AND PUBLIC AGENCIES

CITY OF LEE'S SUMMIT PUBLIC WORKS	Dena Mezger	(816) 969-1800
WATER UTILITIES	Mark Schaufler	(816) 969-1900
ELECTRIC EVERGY	Ron Dejarnette	(816) 347-4316
GAS SPIRE	Brent Jones	(816) 399-9633
TELEPHONE AT&T	Marty Loper Mark Manion	(816) 275-1550 (816) 325-6516
CABLE COMCAST	Barbara Brown	(816) 795-2255

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP! CALL BEFORE YOU DIG!

NOTE:

Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.

CONTACTS

ENGINEERING

Engineering Primary 781-4200
Ronald L. Cowger, PE

Engineering Alternate 781-4200
Art Akin, PE

DEVELOPER

SUPERSTAR HOLDINGS, LLC
TIM HARRIS
244 W. MILL STREET, SUITE 101
LIBERTY, MISSOURI, 64068
(816) 781-3322

STATUS

☒ FOR PERMIT
☐ FOR CONSTRUCTION

DATE:

2-17-23

ENGINEER'S CERTIFICATION:

I hereby certify that this project has been designed, and these plans prepared, to meet or exceed the design criteria of City of Lee's Summit, Missouri, in current usage, except as indicated below.

Exceptions: 1. _____
2. _____
3. _____
4. _____

I have not been retained to coordinate as-built drawings for this project.

STATE OF MISSOURI · RONALD L. COWGER · NUMBER PE-29705 · PROFESSIONAL ENGINEER · 2-17-23

Ronald L. Cowger, PE
AGC Engineers, Inc.

AGC Engineers, INC.
405 S. Leonard St., Suite D
Liberty, Missouri 64068
www.agcengineers.com
816.781.4200 ■
fax 792.3666

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

GENERAL PROJECT NOTES:

1. The Contractor shall, at a minimum, have the following document(s) at the job site at all times:
   Signed approved plans,
   Contract Documents and Project Specifications,
   Standard Specifications (Kansas City Metro Chapter-APWA)
   All required permits
2. The Contractor shall reference the City of Lee's Summit Design Criteria, Standard Specifications, Standard Details, Approved Products Lists found at the following website
   https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure
3. This Project shall be constructed in accordance with these Plans, City of Lee's Summit criteria and specifications (listed above), and their absence the Kansas City Metro Chapter of American Public Works Association (most current version) "APWA".
4. All work required to complete the project and that is not specifically itemized in the Contractor's proposal shall be considered subsidiary to other work itemized in the proposal.
5. All materials and workmanship associated with this project shall be subject to inspection by the City of Lee's Summit and the Owner. The City and/or Owner reserves the right to accept or reject any such materials and workmanship that does not conform to the Standards and Technical Specifications.
6. RESERVED
7. The Contractor shall notify the Engineer immediately of any discrepancies in the Plans.
8. By use of these Plans the Contractor agrees that he shall be solely responsible for the safety and protection of the construction workers and the public.
9. Contractor is to obtain the necessary permits for all construction activities.
10. Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.
11. RESERVED
12. It shall be the responsibility of the Contractor to control erosion and siltation during all phases of construction.
13. Any sidewalk, curb & gutter or pavement disturbed, damaged or destroyed during construction shall be replaced by Contractor at no additional cost to Owner.
14. Modified curb shall be used at all locations where pavement drains away from curb.
15. The Contractor shall contact the City's Development Service Engineering Inspectors 48 hours prior to any land disturbance work at (816) 969-1200.
16. Contractor shall be responsible to install pavement joints on all concrete pavement, slabs, and / or sidewalk. At a minimum, an expansion joint shall be provided along all interfaces of
    1. Building to sidewalk
    2. Building to concrete pavement
    3. Sidewalk to concrete pavement

    Contractor shall submit a joint plan to the Engineer for review.

GRADING NOTES:

1. Erosion protection shall be in place prior to any land disturbance.
2. Contours shown are to finished grade.
3. The construction area shall be cleared, grubbed, and stripped of topsoil and organic matter from all areas. Excess topsoil shall be stockpiled separately from compactable material. Stripping existing topsoil and organic matter shall be to a minimum depth of six (6) inches.
4. Areas to receive fill shall be striped of top soil and other organic material, scarified, and the top eight (8) inch depth compacted to 98% standard proctor density prior to the placement of any fill material. Any unsuitable areas shall be undercut and replaced with suitable material before any fill material can be placed.
5. Fill material shall be made in lifts not to exceed nine (9) inches depth compacted to 98% standard proctor density (per ASTM D-698) with a moisture content -3% and +2% optimum moisture. Contractor shall provide (at his/her sole cost) an independent geotechnical report certifying compaction at a sample interval of one (1) sample per 5000 square feet per lift or more frequent if required/recommended by the geotechnical firm. Geotechnical firm shall be approved by Owner prior to beginning fill operations. Fill material may include rock from on-site excavation if carefully placed so that large stones are well disturbed and voids are completely filled with smaller stones, earth, sand or gravel to furnish a solid embankment. No rock larger than three (3) inches in any dimension nor any shale shall be placed in the top 12 inches of embankment.
6. In all areas of excavation, if unsuitable soil conditions are encountered, a qualified Geotechnical engineer shall recommend to the Owner on the methods of undercutting and replacement of property compacted, approved fill material.
7. All slopes are to be 3:1 or flatter unless otherwise indicated.
8. All slopes and areas disturbed by construction shall be graded smooth and a minimum four (4) inches of topsoil applied. If adequate topsoil is not available on-site, the Contractor shall provide topsoil, approved by the Owner, as needed. Any areas disturbed for any reason shall be corrected by the Contractor at no additional cost to the Owner prior to final acceptance of the project.
9. All disturbed areas shall be seeded, fertilized and mulched or sodded in accordance with the standards and specifications adopted by the reviewing governing agency and good engineering practices.

EROSION CONTROL NOTES:

1. Control of sediment is a very dynamic (ever changing) process. These plans are provided as a basis of anticipated erosion control measures. The Contractor shall modified add or delete with the Owner's permission the erosion control measure shown to prevent the migration of sediment off of the Owner's property and/or into jurisdictional waters/waterways.
2. Any sediment deposited on public streets shall be removed immediately by Contractor at his sole expense.
3. Stockpile excavation materials away from existing channels and grade to drain to adequate erosion control measures.
4. Remove silt build up in temporary sediment basins (if applicable), inlet protection devices and/or silt fence until site is completely stabilized. Verify grade prior to final seeding, lining or rip-rap installation.
5. All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Kansas City Metro Chapter of American Public Works Association. Seeding/Sodding shall be completed within 14 days after completing the work, in any area. If this is outside of the recommended seeding period, erosion control measures or other similarly effective measure shall remain and be maintained by Contractor until such time that the areas can be seeded and a stand of grass established per Missouri DNR or MoDOT Section 805.4 standards.
6. When sediment deposits reach approximately one-half the height of the BMP, the sediment shall be removed or a second BMP shall be installed. All costs associated with this work, including related incidents, shall be the Contractor's responsibility and shall be included in the bid for the proposed work.
7. Contractor shall perform BMP inspection once a week and after each rainfall event, and provide Owner a copy of report within 48 hrs. Faulty or inadequate erosion control measures shall be remediated or modified the same day of inspection so as to minimize the risk of sediment discharge from the Owner's property or jurisdictional waters/waterways.
8. Contractor shall protect and maintain erosion control measures until a complete stand of grass as defined by Missouri DNR has been established.
9. Concrete Washout Areas will be determined onsite by the Job Superintendent.
10. At a minimum the following permits/approvals shall be posted on site or as required by the permit terms and conditions:
    City of Lee's Summit Land Disturbance Permit.
11. Permanent fertilizing, seeding (Type "A") and mulch shall be in accordance with Kansas City Metro Chapter of American Public Works Association. Final acceptance per MoDOT Sections 805.4
12. The Contractor shall install Erosion Control Blanket (ECB) on all slopes with 3:1 slope or greater. ECB shall be Landlok CS2 or approved equal.
13. Provide temporary silt fencing at all pipe entrances until all site seeding and sodding has been established. Maintain as necessary.
14. Immediately remove sediments or other materials tracked onto public roadways.
15. Provide and maintain stabilized roadway construction entrance (or entrances as may be required).
16. Coordinate site grading with existing and proposed utilities.
17. Stock pile waste excavation materials away from existing channels and grade to drain.
18. Remove silt build up in basin and verify grade prior to final seeding, lining or rip-rap installation and clean up.
19. All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Standards and Specifications adopted by the City of Lee's Summit, MoDOT, MoDNR or other governing agency and good engineering practices.
20. Silt fences, whether straw bales or filter fabric, require maintenance to preserve their effectiveness. All silt fences shall be inspected immediately after each heavy rainstorm and at least daily during prolonged rainfall. Any required repairs shall be made immediately. When sediment deposits reach approximately one-half the height of the silt fence, the sediment shall be removed or a second silt fence shall be installed. All costs associated with this work, including related incidentals, shall be the contractor's responsibility and shall be included in the bid for the proposed work.

WATER NOTES:

1. Reference MEP Plans to confirm fire protection main size, domestic water and meter sizes. If a discrepancy exists between the Plans contact the Engineer prior to ordering material.
2. Domestic water shall be 1-inch "k" copper conforming to the latest federal specifications or cross-linked polyethylene (PEX) meeting current City Code.
3. Minimum cover for water lines shall be 42 inches.
4. Install fittings as required. maximum pipe deflection per manufacturers recommendations.
5. Install 1-inch water meter at property line (on private property side).
6. All water service installation, including back-flow devices, are subject to field verification and approval by City inspector.

STORM NOTES:

1. All HDPE pipe shall be Water-Tight
2. All High Density Polyethylene (HDPE) pipe shall conform to AASHTO M294 Type S. Acceptable pipe must come from a Plastic Pipe Institute (PPI) certified manufacturer and have passed the PPI 3rd Party Certification testing. Each individual section of pipe shall be marked in accordance with AASHTO M294 and shall be affixed with the PPI Certification label. HDPE pipe shall be joined with water tight joints meeting the requirements of AASHTO M294 Paragraph 7.9.3.
3. Pipe lengths are from inside face to inside face.
4. End sections for HDPE pipe shall be metal with concrete toe wall unless noted otherwise.

ELECTRIC:

1. Contractor to coordinate with Evergy Electric for electrical service.
2. Contractor to coordinate with Evergy Electric for location of transformer pad and transformer if required.

GAS:

1. Contractor to coordinate with Spire for gas service, and location of meter.

TELEPHONE:

1. Site contractor to install PVC conduit(s) for use by telephone company. Site contractor to coordinate with telephone company for installation of service and location of proposed pedestals, etc. Telephone conduit shall have a minimum cover of 30". Site contractor shall coordinate location with telephone company representative and locate PVC crossings as necessary. See building plans for entrance locations.

REFERENCE DOCUMENTS & DRAWINGS:

Contractor shall reference the following documents prior to beginning Work
1. Architectural Plans (including but not limited to MEP and Structural Plans)
2. Landlord Work Order list from Superstar Holdings, LLC

SANITARY NOTES:

1. All sanitary stub lines shall be laid on 2.00% grade unless approved otherwise.
2. The Contractor shall install and properly maintain a mechanical plug at all connection points with existing lines until such time that the new line is tested and approved.
3. Where sanitary sewer lines are to be installed over and across water lines, a minimum of 24 inches of clearance shall be provided. Where clearance is not provided, construct sanitary sewer line of ductile iron pipe for a distance of at least 10 feet in each direction from crossing, with no joint within 6 feet of crossing.
4. Performance testing in accordance with APWA Section 2508. Witness and acceptance by City is required before placing in service.
5. All service lines shall be PVC (SDR 26) conforming to ASTM D 1764 and F1336 and having a cell classification of 12454B or 12364B as defined in ASTM D 1784 with Push-On joints.
6. All pre-cast manholes shall meet or exceed standards and specifications as set forth in ASTM C-478.
7. All PVC pipe shall meet or exceed standards and specifications as set forth in ASTM D-3034.
8. All proposed and existing street crossings shall be tamped granular backfill (Type 3) from the bottom of the trench to a point that is 15" below the finished grade of the street. All existing street crossings shall be filled with flowable fill per detail STR-011.
9. Mandrel testing is required and shall be performed in accordance with APWA 2508.5, at a minimum of 30 days after installation.
10. All inspection of sanitary sewer construction shall be performed by the City of Lee's Summit.
11. It is the responsibility of the contractor to have sanitary sewer lines air tested and sanitary sewer manholes vacuum tested for new construction and modifications to existing. Contractor shall provide city with test results upon completion of construction.
12. Areas with less than three (3) feet of depth from existing grade to proposed top of pipe shall be filled to an elevation of three (3) feet above the proposed top of pipe, compacted to 95% density +/-2% prior to trenching or laying of any pipe.
13. Sanitary sewer piping material shall be as follows:

    0 to 15' depth; SDR-35 PVC
    15' to 22' depth; SDR-26 PVC
    22' to 30' depth; SDR-21 PVC
    greater than 30' depth; D.I.P.
    6" service laterals; SDR-35 PVC at 2.0% minimum.

14. All manholes, catch basins, utility valves, and meter pits shall be adjusted or rebuilt to grade as required.
15. Service lines shall be extended a minimum of 1 foot past the house side of all utility easements.
16. Insert Tee's or Saddles for service lines are not allowed except in special cases with prior City approval and City observation of installation.

LEGEND

EXISTING

- DOWN GUY
- FINISH FLOOR ELEVATION
- FIRE HYDRANT
- IRON BAR
- MANHOLE
- PP POWER POLE
- SIGN
- TREE
- M WATER METER
- WATER VALVE
- YARD LIGHT
- OHP OVERHEAD POWER
- UGG UNDERGROUND GAS
- UGP UNDERGROUND POWER
- UGW UNDERGROUND WATER

PROPOSED

- SANITARY STRUCTURE
- SAN SANITARY SEWER
- STORM STRUCTURE
- STORM SEWER
- W WATERLINE
- WM WATER METER
- WATER VALVE
- G GAS LINE
- CO CLEANOUT
- 780 CONTOUR
- LIGHT POLE (SITE PARKING)

D/E	DRAINAGE EASEMENT
GM	GAS METER
WM	WATER METER
E/E	ELECTRIC EASEMENT
U/E	UTILITY EASEMENT
B/L	BUILDING LINE SETBACK
MH	MANHOLE
R	RADIUS OR RAMP (as it relates to sidewalks)
L	LANDING (as it relates to sidewalks)
S/W or SW	SIDEWALK
AC	AIR CONDITIONER
MEP	MECHANICAL, ELECTRICAL & PLUMBING
WSD	WATER SERVICES DEPARTMENT
D.S.	DOWN SPOUT
TC	TOP OF CURB
G	GROUND
P	PAVEMENT
LP	LOW POINT
HP	HIGH POINT

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

AGC Engineers, INC.
405 S. Leonard St., Suite D
Liberty, Missouri 64068
816.781.4200 ■
fax 792.3666
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STATE OF MISSOURI
RONALD L. COWDER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
GENERAL NOTES & LEGEND

2

SANITARY MANHOLE 10
TOP EL=1000.90
FL IN W=994.1 8" PVC
FL IN NW=994.1 6" PVC
FL OUT NE=993.7 8" PVC

SANITARY MANHOLE 11
TOP EL=1000.67
FL IN SW=992.9 8" PVC
FL IN SW=986.9 8" PVC DROP
FL IN NW=986.9 8" PVC
FL OUT NE=986.5 8" PVC

CURB INLET 3
TOP EL=1000.73
FL IN W=997.2 24" HDPE
FL IN SE=996.9 15" HDPE
FL OUT NW=996.3 24" HDPE

CURB INLET 2
TOP EL=1000.85
FL IN SE=998.0 15" HDPE
FL OUT NW=997.8 15" HDPE

SPRINKLER CONTROL VALVE

NW DONOVAN RD

FLOWER BED WITH LIGHTING FOR SIGN AND SPRINKLERS

WATER VAULT

DECORATIVE WALL

4" PL IP

SANITARY MANHOLE 13
TOP EL=1006.27
FL IN W=995.8 8" PVC
FL OUT E=995.6 8" PVC

CURB INLET 1
TOP EL=1004.02
FL OUT NE=998.8 15" HDPE

FF DOOR
EL=1007.36

BOLLARDS TYPICAL

CONCRETE

ASPHALT

STORM MANHOLE 5
TOP EL=1009.88
FL IN W=991.3 UNKNOWN SIZE AND TYPE
FL OUT SE=991.3 UNKNOWN SIZE AND TYPE

MONITORING WELL

ACCESS UNDERGROUND GASOLINE TYPICAL

MONITORING WELL

BLOCK RETAINING WALL

ROUND IRON GRATE 14
TOP EL=1004.23
FL IN W=990.7 36" HDPE
FL OUT NE=990.6 36" HDPE

STORM MANHOLE 4
TOP EL=1005.64
FL IN SW=990.6 36" HDPE
FL OUT E=990.5 36" HDPE

GRATE INLET 15
TOP EL=1004.12
TOP GRATE NOT ATTACHED TO 18" VERTICAL HDPE UNABLE TO WITNESS PIPE AT BOTTOM
BOTTOM EL=990.5

SIGN

PULL BOX

CURB INLET 9
TOP EL=1009.58
FL OUT E=1005.6 15" RCP

TELEPHONE MANHOLE

ATT TRANSFORMER

ELECTRIC METER AND FUSE BOX

CROSS WALK CONTROL

TRAFFIC SIGNAL PULL BOX FIBER OPTIC PULL BOX

CURB INLET 7
TOP EL=1006.23
FL IN W=1001.1 15" RCP
FL OUT E=1001.0 15" RCP

ATT PULL BOX

TRAFFIC FUSE CONTROL

CROSS WALK SIGNAL

CURB INLET 6
TOP EL=1005.74
FL IN W=999.3 15" HDPE
FL OUT E=999.0 15" HDPE

CURB INLET 8
TOP EL=1006.46
FL IN W=997.7 15" HDPE
FL OUT NE=997.2 15" HDPE

NW CHIPMAN RD

BEARINGS SHOWN HEREON ARE BASED ON THE ALTA/NSPS LAND TITLE SURVEY OF LOT 4E-2 OF SUMMIT ORCHARD MINOR PLAT, LOTS 4E-1 AND 4E-2.

THIS SURVEY WAS PERFORMED SEPTEMBER 16-OCTOBER 13, 2022.

THIS SURVEY WAS COMPLETED IN THE FIELD ON OCTOBER 13, 2022 AND WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

UTILITIES:
THE INFORMATION CONCERNING LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WHICH ARE NOT VISIBLE FROM THE SURFACE, HAS BEEN TAKEN FROM THE RECORDS AND FIELD LOCATIONS OF THE VARIOUS UTILITY COMPANIES AND HAS NOT BEEN FIELD VERIFIED BY THIS COMPANY. THESE LOCATIONS ARE NOT TO BE CONSTRUED AS ACCURATE OR EXACT.

SCALE 1 INCH = 20 FEET (20 0 20 40)

LEGEND
- CONTROL POINT
- DOWN GUY
- FINISH FLOOR ELEVATION
- FIRE HYDRANT
- IRON BAR
- MANHOLE
- POWER POLE
- SIGN
- TREE
- WATER METER
- WATER VALVE
- YARD LIGHT
- OVERHEAD POWER
- UNDERGROUND GAS
- UNDERGROUND POWER
- UNDERGROUND WATER

MCLAUGHLIN MUELLER, INC.
Professional Land Surveyors
218 West Mill Street
Liberty, MO 64068
PH 816-407-0002 FX 816-407-0003
Corporation LS 1999141096

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

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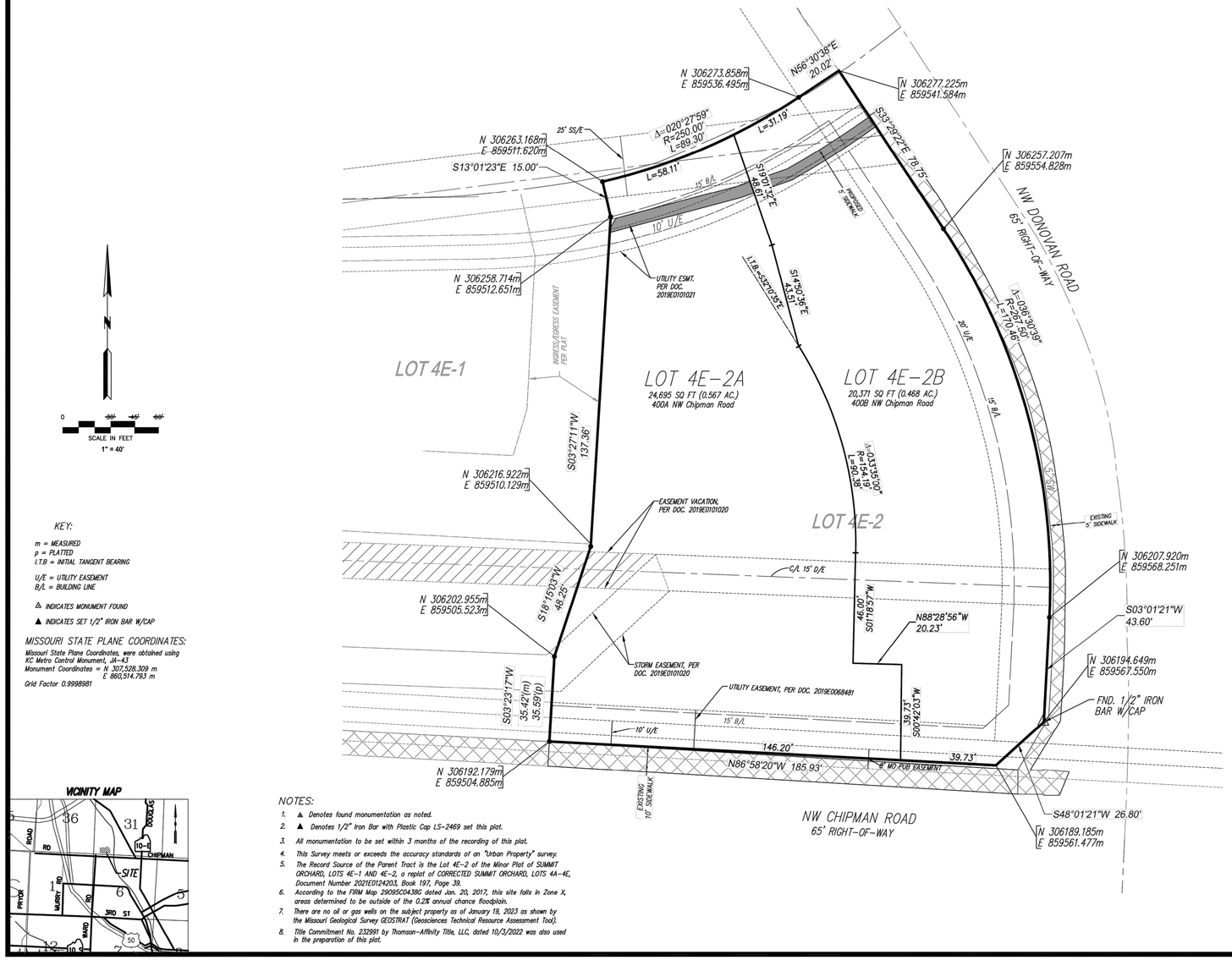
SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
EXISTING CONDITIONS

3A

MINOR PLAT
SUMMIT ORCHARD MINOR PLAT, 4E-2A & 4E-2B
A REPLAT OF LOT 4E-2, SUMMIT ORCHARD, LOTS 4E-1 AND 4E-2
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



0 30' 45' 60'
SCALE IN FEET
1" = 40'

KEY:

m = MEASURED
p = PLATTED
I.T.B = INITIAL TANGENT BEARING

U/E = UTILITY EASEMENT
B/L = BUILDING LINE

△ INDICATES MONUMENT FOUND

▲ INDICATES SET 1/2" IRON BAR W/CAP

MISSOURI STATE PLANE COORDINATES:

Missouri State Plane Coordinates, were obtained using KC Metro Control Monument, JA-43
Monument Coordinates = N 307,528.309 m
E 860,514.793 m
Grid Factor 0.9998981

VICINITY MAP

NOTES:

1. △ Denotes found monumentation as noted.
2. ▲ Denotes 1/2" Iron Bar with Plastic Cap LS-2469 set this plat.
3. All monumentation to be set within 3 months of the recording of this plat.
4. This Survey meets or exceeds the accuracy standards of an "Urban Property" survey.
5. The Record Source of the Parent Tract is the Lot 4E-2 of the Minor Plat of SUMMIT ORCHARD, LOTS 4E-1 AND 4E-2, a replat of CORRECTED SUMMIT ORCHARD, LOTS 4A-4E, Document Number 2021E0124203, Book 197, Page 39.
6. According to the FIRM Map 29095C0438G dated Jan. 20, 2017, this site falls in Zone X, areas determined to be outside of the 0.2% annual chance floodplain.
7. There are no oil or gas wells on the subject property as of January 19, 2023 as shown by the Missouri Geological Survey GEOSTRAT (Geosciences Technical Resource Assessment Tool).
8. Title Commitment No. 232991 by Thomson-Affinity Title, LLC, dated 10/3/2022 was also used in the preparation of this plat.

PROPERTY DESCRIPTION:

ALL OF LOT 4E-2, SUMMIT ORCHARD MINOR PLAT, LOTS 4E-1 and 4E-2, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, CONTAINING 1.04 ACRES.

DEDICATION: THE UNDERSIGNED OWNER(S) OF THE PROPERTY DESCRIBED HEREIN HAS/HAVE CAUSED THE SAME TO BE SUBDIVIDED IN THE MANNER SHOWN ON THIS PLAT AND THE PROPERTY SHALL HEREAFTER BE KNOWN AS "SUMMIT ORCHARD MINOR PLAT, LOTS 4E-2A and 4E-2B".

EASEMENTS: AN EASEMENT OR LICENSE IS HEREBY GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, TO LOCATE, CONSTRUCT AND MAINTAIN, OR TO AUTHORIZE THE LOCATION, CONSTRUCTION AND MAINTENANCE OF POLES, WIRES, ANCHORS, CONDUITS, AND/OR STRUCTURES FOR WATER, GAS, SANITARY SEWER, STORM SEWER, ELECTRICITY, TELEPHONE, CABLE TELEVISION, OR ANY OTHER NECESSARY PUBLIC UTILITY OR SERVICES, ANY OR ALL OF THEM, UPON, OVER, OR UNDER THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS UTILITY EASEMENTS (U.E.), OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO PUBLIC USE ON THIS PLAT.

GRANTOR, ON BEHALF OF HIMSELF, HIS HEIRS, HIS ASSIGNS AND SUCCESSORS IN INTEREST, HEREBY WAIVES, TO THE FULLEST EXTENT ALLOWED BY LAW, INCLUDING, WITHOUT LIMITATION, SECTION 527.188, RSMO. (2016), ANY RIGHT TO REQUEST RESTORATION OF RIGHTS PREVIOUSLY TRANSFERRED AND VACATION OF THE EASEMENT HEREIN GRANTED.

DRAINAGE PLAN: INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE FLOW PATH ON LOTS, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.

BUILDING LINES: BUILDING LINES OR SETBACK LINES ARE HEREBY ESTABLISHED AS SHOWN ON THE ACCOMPANYING PLAT AND NO BUILDING OR PORTION THEREOF SHALL BE CONSTRUCTED BETWEEN THIS LINE AND THE STREET RIGHT OF WAY LINE.

IN TESTIMONY WHEREOF, THE UNDERSIGNED OWNERS HAVE HEREUNTO SET THEIR HANDS THIS _____ DAY OF _____, 20____ .

_____
SUPERSTAR HOLDINGS, LLC, ROBERT DE LA FUENTES – MEMBER

STATE OF _____
COUNTY OF _____
ON THIS _____ DAY OF _____, 20___, BEFORE ME PERSONALLY APPEARED THE ABOVE PERSON(S), TO ME KNOWN TO BE THE PERSON(S) DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT AND ACKNOWLEDGED THAT THEY EXECUTED THE SAME AS THEIR FREE ACT AND DEED.
IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL AT MY OFFICE IN SAID COUNTY AND STATE THE DATE AND YEAR LAST WRITTEN ABOVE.

NOTARY PUBLIC _____ MY COMMISSION EXPIRES: _____

APPROVED:

THIS IS TO CERTIFY THAT THE MINOR PLAT OF "SUMMIT ORCHARD MINOR PLAT, LOTS 4E-2A AND 4E-2B" WAS SUBMITTED TO AND DULY APPROVED BY THE CITY OF LEE'S SUMMIT, MISSOURI, PURSUANT TO CHAPTER 33, THE UNIFIED DEVELOPMENT ORDINANCE, OF THE CODE OF ORDINANCES.

_____
TRISHA FOWLER ARCURI – CITY CLERK DATE

_____
GEORGE M. BINGER III, P.E. - CITY ENGINEER DATE

_____
JOSHUA JOHNSON – DIRECTOR OF DEVELOPMENT SERVICES DATE

APPROVED BY JACKSON COUNTY ASSESSOR/GIS DEPARTMENT:

By _____

Date _____

I hereby certify that the within plat of SUMMIT ORCHARD MINOR PLAT, LOTS 4E-2A AND 4E-2B, is based on an actual survey made by me or under my direct supervision and that said survey meets or exceeds the current MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS as adopted by the Missouri Board for Architects, Professional Engineers, and Land Surveyors and the Missouri Department of Natural Resources. I further certify that the Section and Sectional Subdivision corner monuments and survey boundary corner monuments were either found or set as indicated on this plat; that I have complied with all State and City of Lee's Summit statutes, ordinances and regulations governing the practice of surveying and platting of subdivisions to the best of my knowledge and belief.

REVIEW COPY

R. Kevin Sterrett, MO LS-2469 Date

Surveyed for:
Superstar Holdings, LLC
Robert De La Fuentes
244 W. Mill Street, Suite 101
Liberty, Mo. 64068

Sheet 1 of 1
Project No.: 23.006
Prepared: 01/19/2023
Prepared By: SPW

Consult Inc engineers planners
1533 Locust Street, Kansas City, Missouri 64108
CORPORATE LICENSE No. E201000573 (MO.) / E-1736 (KS.)

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

AGC Engineers, INC.
405 S. Leonard St., Suite D
Liberty, Missouri 64068
816.781.4200 ■
fax 792.3666
www.agcengineers.com

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
PROPOSED MINOR PLAT

3B

SITE DATA:

lot No.	Address	Existing Zoning	Proposed Zoning	Proposed Use	Anticiapted Schedule	Land Area (sf) Gross	R/W	POS[1]	POS[2]	Parkland	Net	Proposed Building Area (sf)	No. Stories	FAR	Parking Data Criteria Used	as compared to UDO	required parking	provided parking	Impervious Area Acreage Impervious / % Impervious
4E-2B	to be determined	CP-2	CP-2	exclusive drive-thru	2023-2024	20,371.00	0.000	0.000	0.000	0.000	20,371.00	680	1	0.03	2/1000 + 1/employee at max shift	parking for employees only	3.0	10.0	0.46 AC / 36%
4E-2A	to be determined	CP-2	CP-2	sit down- pickup order	2023-2025							1,080	1	n/a	14/1000	meets UDO	15.1	15.0	
				retail	2023-2025							1,800	1	n/a	5/1000	meets UDO	19.0	12.0	
						24,695.00	0.000	0.000	0.000	0.000	24,695.00	4,880	1	0.20					0.33 AC / 35%
					totals	45,066.00											37.1	37.0	

Legend
POS[1] = Private Open Space not intended to be counted toward parkland dedication
POS[2] = Private Open Space to be counted toward parkland dedication
FAR = Floor Area Ratio

Notes:
1. At the election of the Developer the units may be FOR SALE or FOR RENT/LEASE.

Special Parking Notes:
1. UDO parking ratios

drive thru/sit down	14/1000
drive thru only	2/1000 + 1/employee at max shift
office	4/1000
retail	5/1000

2. Parking is shared per Development Covenants & Conditions

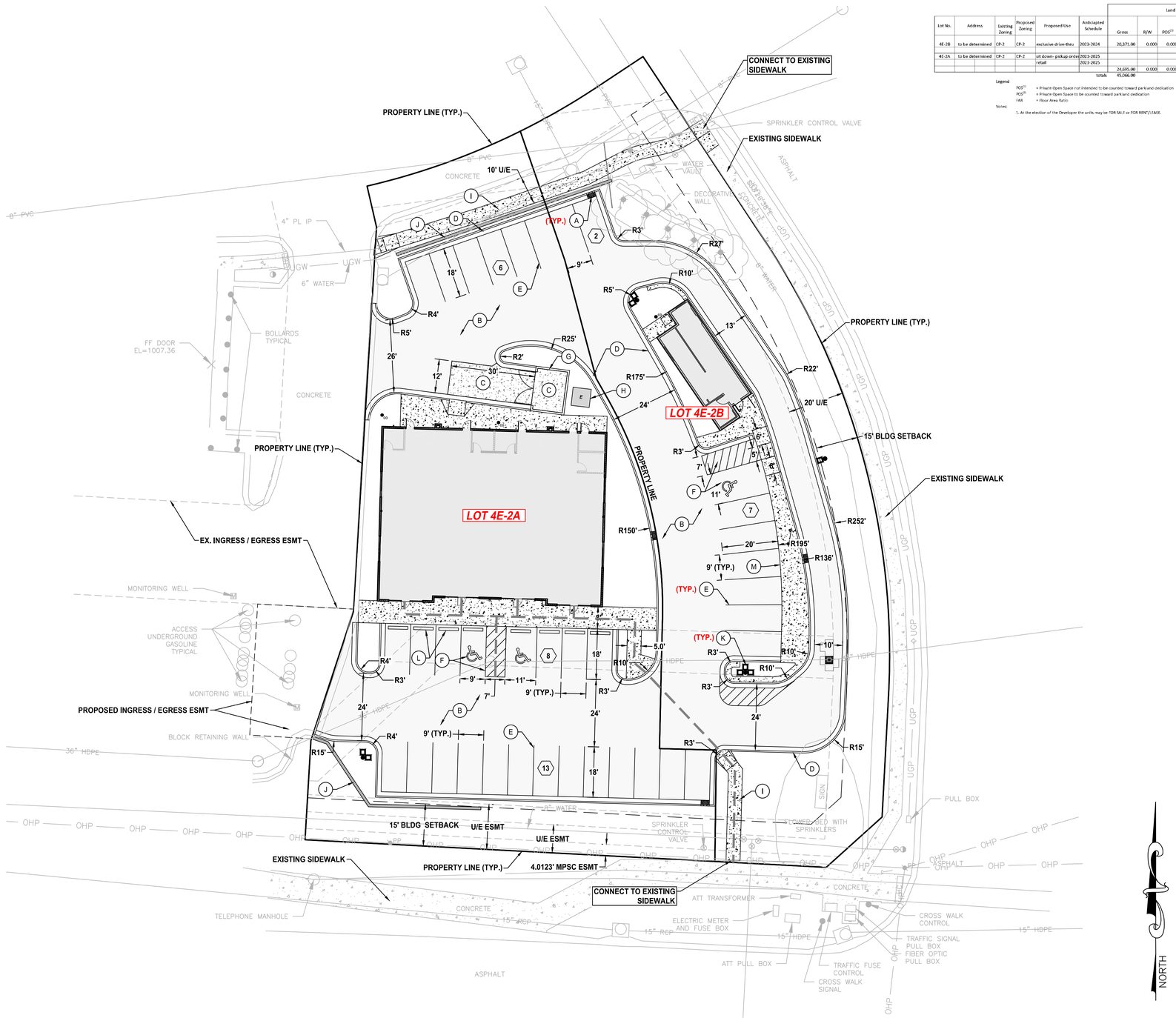
LEGEND:

ADA PEDESTRIAN ROUTE

6 — PARKING STALL COUNTS

KEY LEGEND

- (A) CURB INLET (RE: UTILITY PROFILES)
- (B) CONCRETE PAVEMENT
- (C) HEAVY DUTY CONCRETE
- (D) CG-1 CURB & GUTTER (RE: SPOT ELEVATION PLANS)
- (E) PARKING STRIPING - 4" YELLOW
- (F) STRIPING - (RE: ADA ACCESSIBLE STRIPING LAYOUT)
- (G) TRASH ENCLOSURE (RE: ARCH)
- (H) ELECTRICAL TRANSFORMER
- (I) PROPOSED 5' CONCRETE SIDEWALK
- (J) SEGMENTAL BLOCK WALL
- (K) LIGHT POLE (RE: MEP)
- (L) CONCRETE WHEEL STOP
- (M) INTEGRAL SIDEWALK / CURB



NOTES:

1. CONTRACTOR SHALL COORDINATE WITH SUPERSTAR HOLDINGS, LLC. FOR ANY TENANT - SPECIFIC SIGNAGE, MENU BOARDS, CLEARANCE POSTS, ETC. NOT AVAILABLE TO CIVIL ENGINEER AT TIME OF SITE DESIGN.
2. CONTRACTOR SHALL REVIEW LANDLORD WORK ORDER LETTER PRIOR TO BEGINNING CONSTRUCTION.

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

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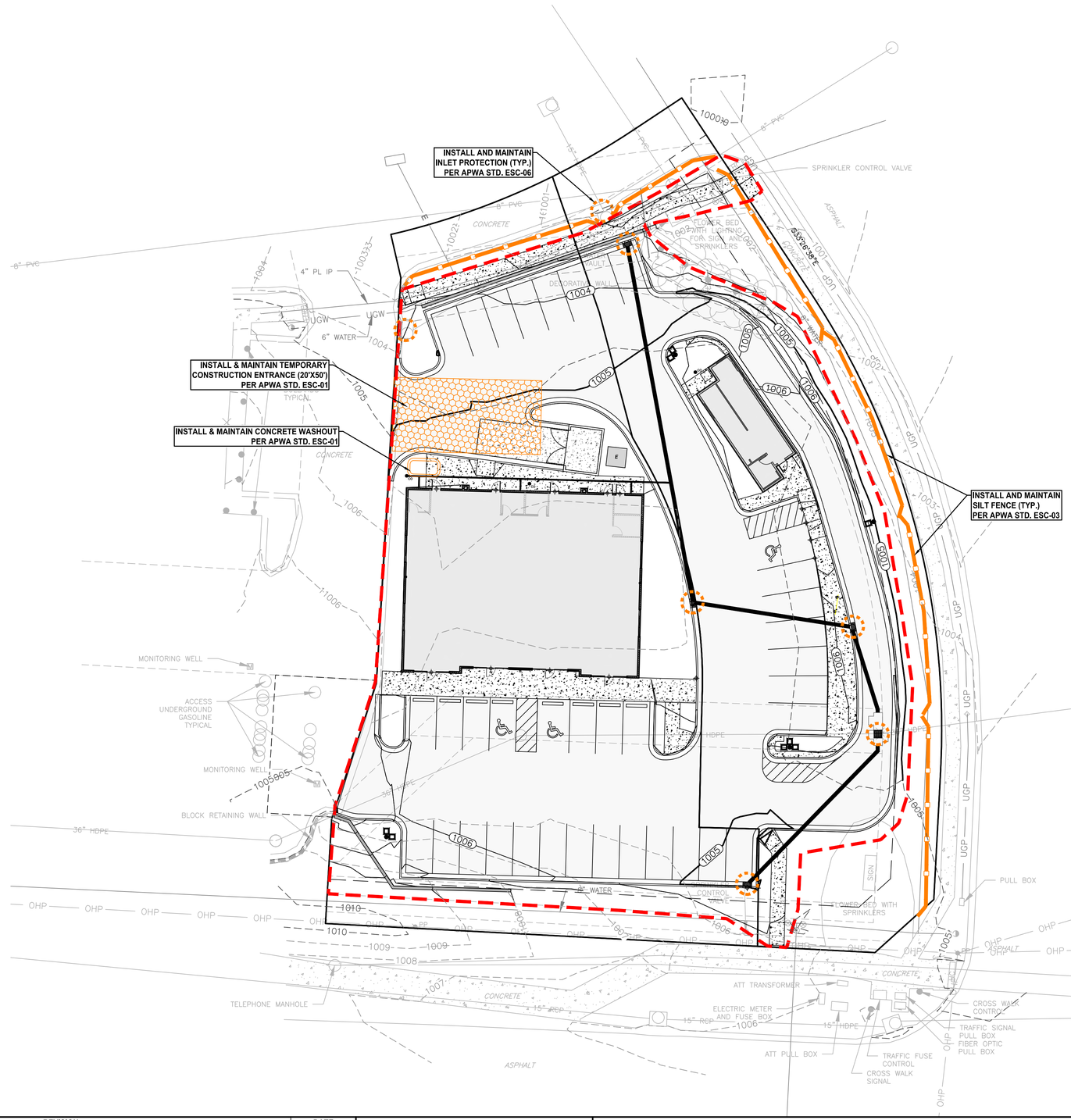
STATE OF MISSOURI
RONALD L. COWSER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
SITE PLAN

4



LEGEND:

EROSION CONTROL

- INLET PROTECTION PER APWA STD. DWG ESC-06
- SILT FENCE PER APWA STD. DWG ESC-03
- LIMITS OF DISTURBANCE

NOTES:

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE BEFORE GRADING.
2. REMOVE TEMPORARY BMPs AFTER PAVING IS COMPLETED AND PERMANENT GRASS IS ESTABLISHED.
3. DISTURBED AREA = 0.84 AC

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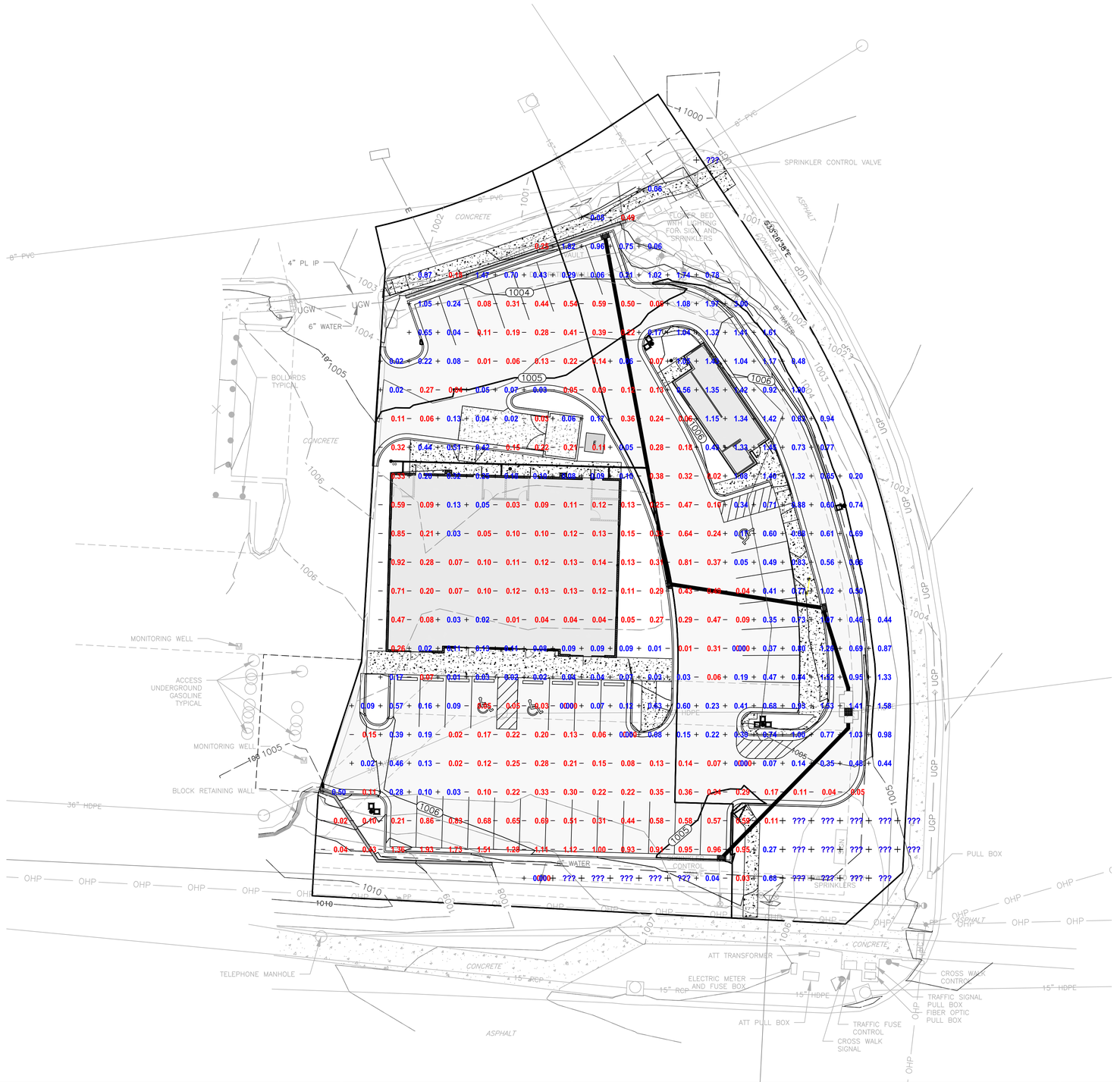
RONALD L. COWNER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
GRADING & EROSION CONTROL PLAN

5



LEGEND:

- \- CUT AREA
- \+ FILL AREA

NOTE:
CUT / FILL SHOWN IS TO FINISHED GRADE AND / OR TOP OF PAVEMENT

BY	REVISION	DATE
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SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
GRADING PLAN - CUT & FILL

6

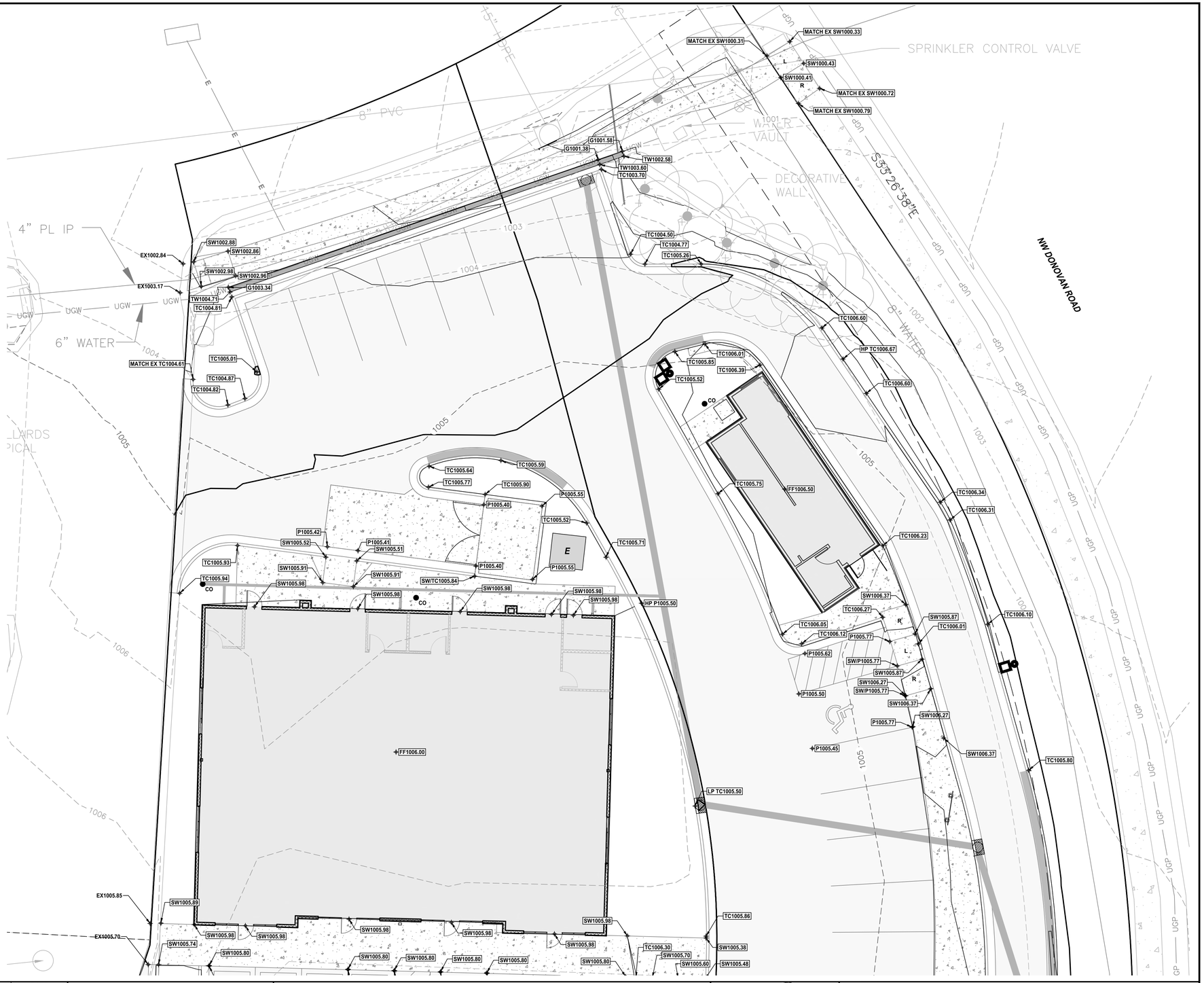
LEGEND

EXISTING

- EX800 — EXISTING GROUND ELEVATION

PROPOSED

- G800 — GROUND ELEVATION
- P800 — PAVEMENT ELEVATION
- TC800 — TOP OF CURB ELEVATION
- TW800 — TOP OF WALL ELEVATION
- LP800 — LOW POINT
- HP800 — HIGH POINT
- SW800 — SIDEWALK ELEVATION
- SW/TC800 — SIDEWALK/TOP OF CURB
- SW/P800 — SIDEWALK/TOP OF PAVEMENT
- FF800 — FINISHED FLOOR
- CG-1 CURB AND GUTTER
- CG-1 MODIFIED CURB AND GUTTER
- R — RAMP
- L — LANDING
- T — TRANSITION
- GRADE BREAK



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2-17-23

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
SPOT ELEVATION PLAN

7

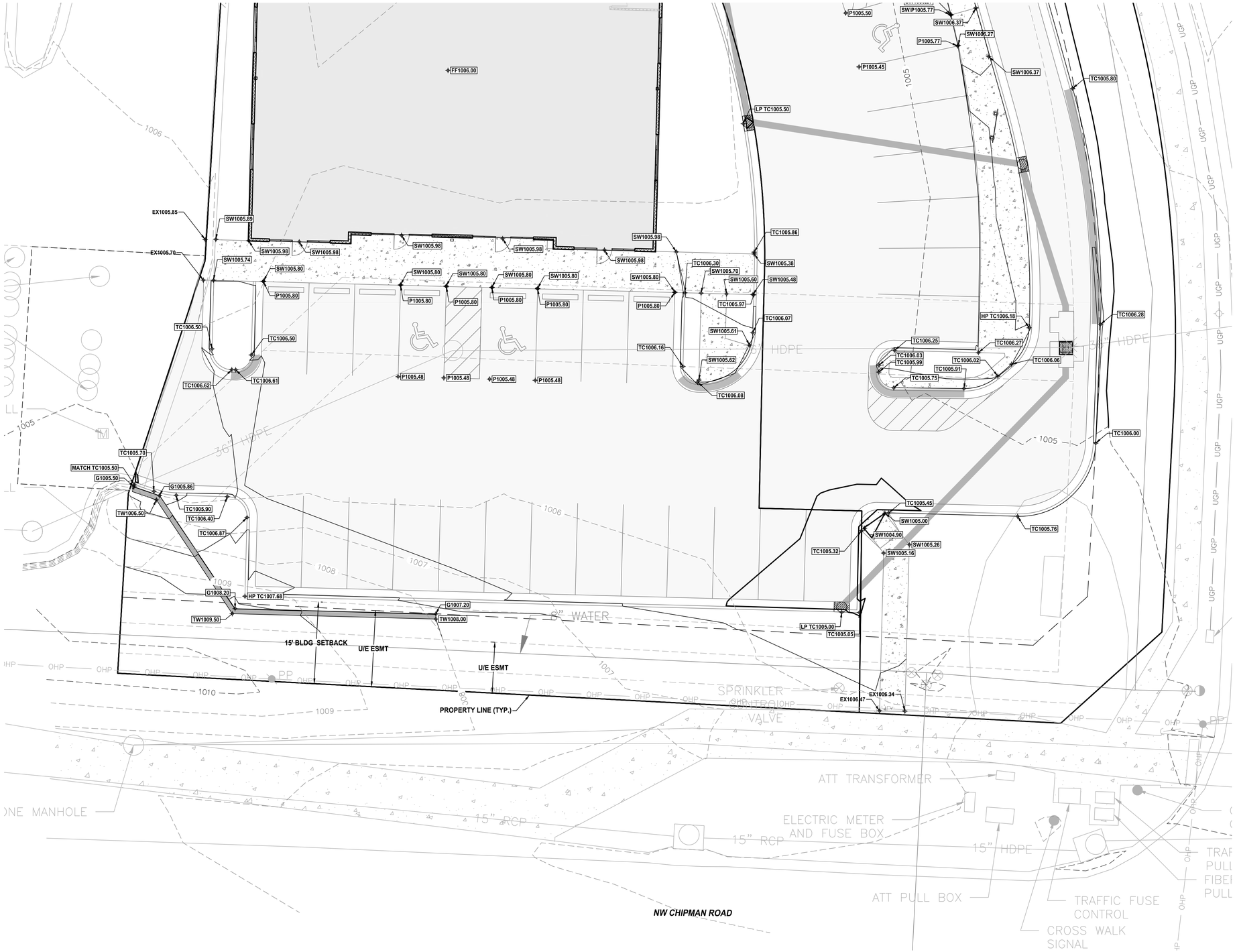
LEGEND

EXISTING

EX800	EXISTING GROUND ELEVATION

PROPOSED

G800	GROUND ELEVATION
P800	PAVEMENT ELEVATION
TC800	TOP OF CURB ELEVATION
TW800	TOP OF WALL ELEVATION
LP800	LOW POINT
HP800	HIGH POINT
SW800	SIDEWALK ELEVATION
SW/TC800	SIDEWALK/TOP OF CURB
SW/P800	SIDEWALK/TOP OF PAVEMENT
FF800	FINISHED FLOOR
	CG-1 CURB AND GUTTER
	CG-1 MODIFIED CURB AND GUTTER
R	RAMP
L	LANDING
T	TRANSITION
	GRADE BREAK



NORTH

BY	REVISION	DATE
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10 0 5 10 20

(IN FEET)
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STATE OF MISSOURI
RONALD L. COWNER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS

SPOT ELEVATION PLAN

8

CURB INLET DESIGN TABLE

Return Frequency 10 yr

Inlet Struct #	Overland Flow (Ti) L (ft)	S (%)	C	Gutter Flow (Ti) L (ft)	S (%)	Mannings n	Inlet Time Ti (min)	Tt (min)	Tc (min)	K	I Inlet (in/hr)	Area Label	Area Inlet (ac)	Q Inlet (cfs)	Gutter Capacity: Back of Curb to Back of Curb (ft)	Gutter Type (1 = CG-1 or 2 = CG-2)	Allowable Gutter Spread (ft)	Street Cross Slope (%)	Max. Gutter Depth (ft)	Max. Gutter Area (sf)	Gutter Cap. (cfs)	Gutter Bypass (positive # = bypass) (cfs)	Inlet Capacity: Str. Size	Slope (%)	Width	100% Cap(cfs)	80% Cap(cfs)	Inlet Bypass (positive # = bypass) (cfs)
10	10	1.3	0.9	88	1.3	0.014	1.04	0.33	5.00	1.00	7.35	D	0.05	**0.3**	28	1	10.5	2.08	0.24	1.04	**3.3**	-3.0	sag	3	5.00	**4.00**	-3.65
11	60	1.3	0.9	20	1.2	0.014	2.56	0.08	5.00	1.00	7.35	C	0.12	**0.8**	28	1	10.5	2.08	0.24	1.04	**3.2**	-2.4	sag	3	5.00	**4.00**	-3.19
12	85	3	0.9	15	3.5	0.014	2.31	0.03	5.00	1.00	7.35	B	0.15	**1.0**	28	1	10.5	2.08	0.24	1.04	**5.4**	-4.5	sag	3	5.00	**4.00**	-3.04
20	90	1.5	0.9	10	1.3	0.014	2.99	0.04	5.00	1.00	7.35	E	0.29	**1.9**	28	1	10.5	2.08	0.24	1.04	**3.3**	-1.4	sag	3	5.00	**4.00**	-2.09

Return Frequency 100 yr

Inlet Struct #	Overland Flow (Ti) L (ft)	S (%)	C	Gutter Flow (Ti) L (ft)	S (%)	Mannings n	Inlet Time Ti (min)	Tt (min)	Tc (min)	K	I Inlet (in/hr)	Area Label	Area Inlet (ac)	Q Inlet (cfs)	Gutter Capacity: Back of Curb to Back of Curb (ft)	Gutter Type (1 = CG-1 or 2 = CG-2)	Allowable Gutter Spread (ft)	Street Cross Slope (%)	Max. Gutter Depth. (ft)	Max. Gutter Area (sf)	Gutter Cap. (cfs)	Gutter Bypass (positive # = bypass) (cfs)	Inlet Capacity: Use a slope of 0.5% for sump conditions	Str. Size	Slope (%)	Width	100% Cap(cfs)	80% Cap(cfs)	Inlet Bypass (positive # = bypass) (cfs)
10	10	1.3	0.9	88	1.3	0.014	1.04	0.33	5.00	1.25	10.32	D	0.05	**0.6**	28	1	10.5	2.08	0.24	1.04	**3.3**	-2.7	sag	3	5.00	**4.00**	-3.39
11	60	1.3	0.9	20	1.2	0.014	2.56	0.08	5.00	1.25	10.32	C	0.12	**1.4**	28	1	10.5	2.08	0.24	1.04	**3.2**	-1.8	sag	3	5.00	**4.00**	-2.59
12	85	3	0.9	15	3.5	0.014	2.31	0.03	5.00	1.25	10.32	B	0.15	**1.7**	28	1	10.5	2.08	0.24	1.04	**5.4**	-3.7	sag	3	5.00	**4.00**	-2.31
20	90	1.5	0.9	10	1.3	0.014	2.99	0.04	5.00	1.25	10.32	E	0.29	**3.3**	28	1	10.5	2.08	0.24	1.04	**3.3**	0.0	sag	3	5.00	**4.00**	-0.65

ROOF DRAIN DESIGN TABLE

Return Frequency 10-yr

Inlet Struct #	Overland Flow (Ti) L (ft)	S (%)	"C"	Channel Flow (Tt) L (ft)	S (%)	V (fps)	Inlet Time Ti (min)	Tt (min)	Tc (min)	"C"	"I" (in/hr)	"A" (ac)	"Q" (cfs)	Upper Inlet By-pass (cfs)	Total Design Flow (cfs)	NOTES
RD1	20	2.0	0.90	60	0.5	1.00	1.28	1.0	2.3	0.90	8.30	0.11	0.82	0.0	**0.82**	roof drain from Lot 4E-2A building (approx 4800 sf)

Return Frequency 100-yr

Inlet Struct #	Overland Flow (Ti) L (ft)	S (%)	"C"	Channel Flow (Tt) L (ft)	S (%)	V (fps)	Inlet Time Ti (min)	Tt (min)	Tc (min)	"C"	"I" (in/hr)	"A" (ac)	"Q" (cfs)	Upper Inlet By-pass (cfs)	Total Design Flow (cfs)	NOTES
RD1	20	2.0	0.90	60	0.5	1.00	1.28	1.0	2.3	0.90	11.60	0.11	1.44	0.0	**1.44**	roof drain from Lot 4E-2A building (approx 4800 sf)

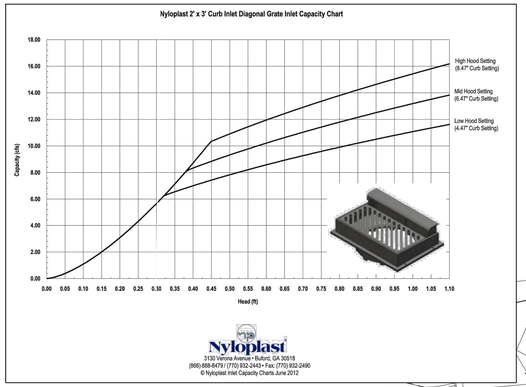
PIPE DESIGN TABLE

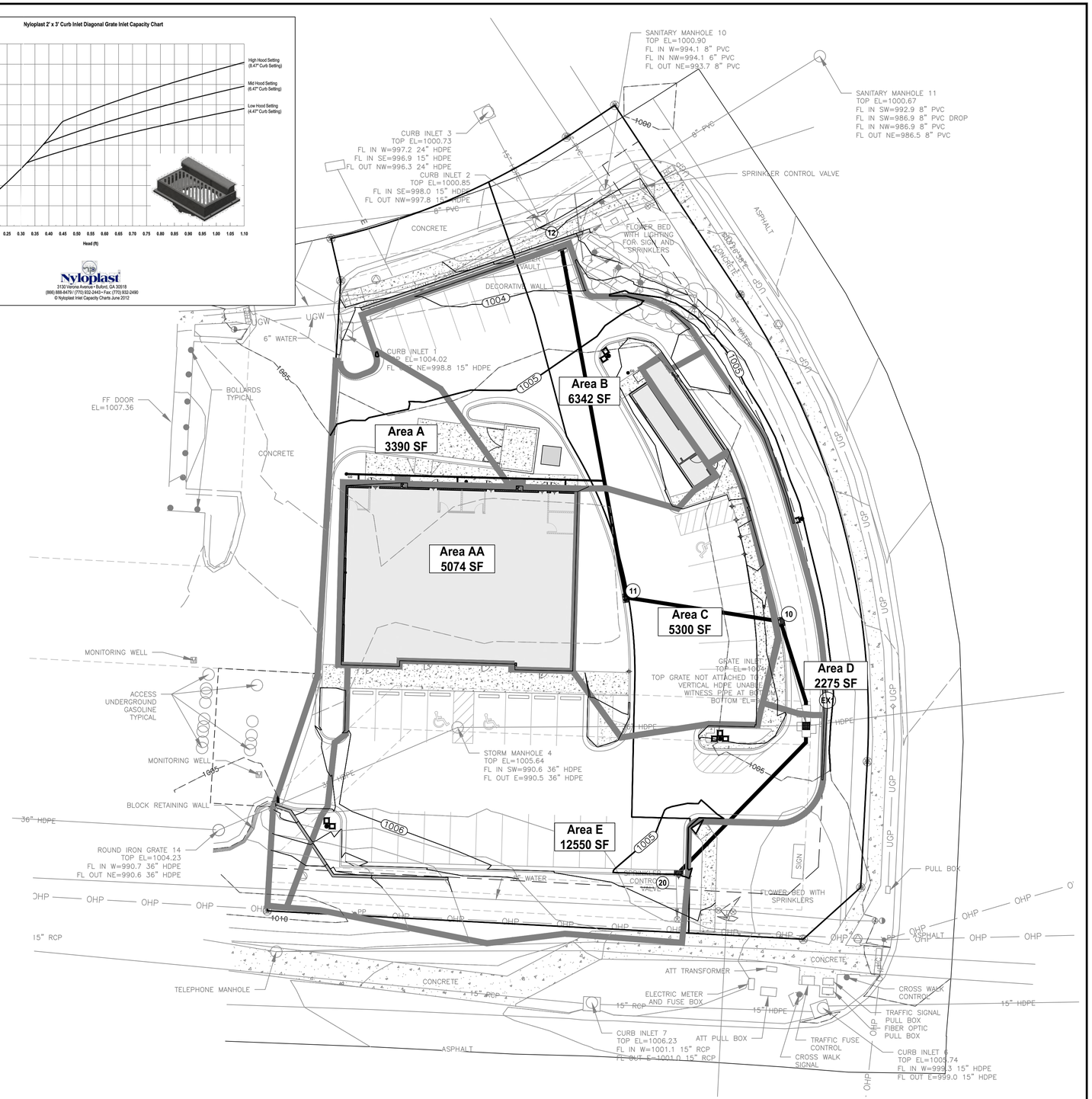
Return Frequency 10 yr

Line	Inlet Struct #	Inlet Type	Inlet Tc (min)	Pipe Tc (min)	K	C	I Pipe (in/hr)	A Pipe (ac)	A Total (ac)	Pipe Capacity: Pipe (cfs)	Pipe dia. (in)	Mannings "n"	Pipe slope (%)	Full Pipe Capacity (cfs)	Full Pipe Velocity (fps)	Gravity Flow Pipe Velocity (fps)	Pressure Flow Pipe Velocity (fps)	Gravity Pipe Flow Depth (feet)	Minor Head Loss Coefficient "K"	Gravity xV^2/2g (feet)	Pressure xV^2/2g (feet)	Length to downstream struct. (ft)	Pressure Slope of Hydro. Sp (%)
1	12	CI	5.00	5.00	1.00	0.90	7.35	0.15	0.15	**1.0**	15	0.012	0.80	**6.3**	5.1	3.7	0.8	0.33	1.00	0.21	0.01	81	0.02%
	RD1	AI	2.28	5.37	1.00	0.90	7.24	0.11	0.37	**2.4**	15	0.012	0.80	**6.3**	5.1	4.7	1.9	0.53	0.50	0.17	0.03	42	0.12%
	11	CI	5.00	5.52	1.00	0.90	7.20	0.12	0.49	**3.2**	15	0.012	0.80	**6.3**	5.1	5.1	2.6	0.63	0.50	0.20	0.05	53	0.20%
	10	CI	5.00	5.69	1.00	0.90	7.15	0.05	0.54	**3.5**	15	0.012	0.80	**6.3**	5.1	5.2	2.8	0.66	0.50	0.21	0.06	29	0.24%
	EX1	Connection to Ex 36" HDPE Pipe Structure																					
2	20	CI	5.00	5.00	1.00	0.90	7.35	0.29	0.29	**1.9**	15	0.012	0.80	**6.3**	5.1	4.4	1.6	0.46	1.00	0.31	0.04	63	0.07%
	EX2	Connection to Ex 36" HDPE Pipe Structure																					
4	RD1	AI	2.28	2.28	1.00	0.90	8.30	0.11	0.11	**0.8**	6	0.012	6.00	**1.5**	7.6	7.8	4.2	0.27	1.00	0.94	0.27	90	1.81%
	x1	connection at Line 1																					
	1	Line 3 not used																					
	2	Inlet RD1 represents the roof drain from Lot 4E-2A building (approx 4800 sf)																					

Return Frequency 100 yr

Line	Inlet Struct #	Inlet Type	Inlet Tc (min)	Pipe Tc (min)	Tc for pipe calculations	K	C	I Pipe (in/hr)	A Pipe (ac)	A Total (ac)	Pipe Capacity: Pipe (cfs)	Pipe dia. (in)	Mannings "n"	Pipe slope (%)	Full Pipe Capacity (cfs)	Full Pipe Velocity (fps)	Gravity Flow Pipe Velocity (fps)	Pressure Flow Pipe Velocity (fps)	Gravity Pipe Flow Depth (feet)	Minor Head Loss Coefficient "K"	Gravity xV^2/2g (feet)	Pressure xV^2/2g (feet)	Length to downstream struct. (ft)	Pressure Slope of Hydro. Sp (%)
1	12	CI	5.00	5.00		1.25	0.90	10.32	0.15	0.15	**1.7**	15	0.012	0.80	**6.3**	5.1	4.3	1.4	0.44	1.0	0.3	0.03	81	0.06%
	RD1	AI	2.28	5.37		1.25	0.90	10.17	0.11	0.37	**4.2**	15	0.012	0.80	**6.3**	5.1	5.5	3.4	0.74	0.5	0.2	0.09	42	0.36%
	11	CI	5.00	5.52		1.25	0.90	10.11	0.12	0.49	**5.5**	15	0.012	0.80	**6.3**	5.1	5.8	4.5	0.91	0.5	0.3	0.16	53	0.62%
	10	CI	5.00	5.69		1.25	0.90	10.04	0.05	0.54	**6.1**	15	0.012	0.80	**6.3**	5.1	5.8	5.0	0.99	0.5	0.3	0.19	29	0.75%
	EX1	Connection to Ex 36" HDPE Pipe Structure																						
2	20	CI	5.00	5.00		1.25	0.90	10.32	0.29	0.29	**3.3**	15	0.012	0.80	**6.3**	5.1	5.2	2.7	0.64	1.0	0.4	0.12	63	0.23%
	EX2	Connection to Ex 36" HDPE Pipe Structure																						
4	RD1	AI	2.28	2.28		1.25	0.90	11.59	0.11	0.11	**1.4**	6	0.012	6.00	**1.5**	7.6	8.6	7.3	0.39	1.0	1.2	0.83	90	5.53%
	x1	connection at Line 1																						
	1	Line 3 not used																						
	2	Inlet RD1 represents the roof drain from Lot 4E-2A building (approx 4800 sf)																						





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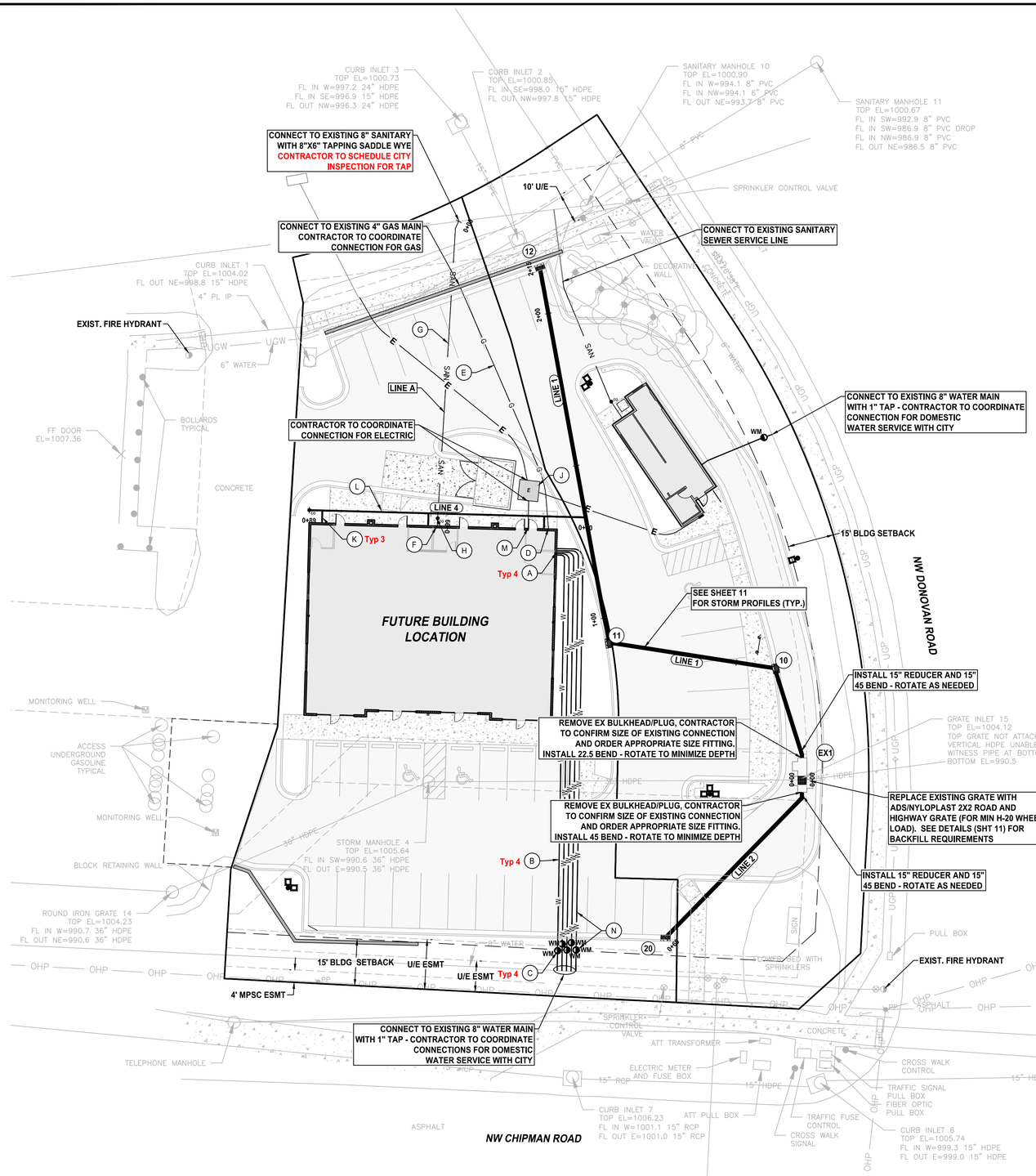
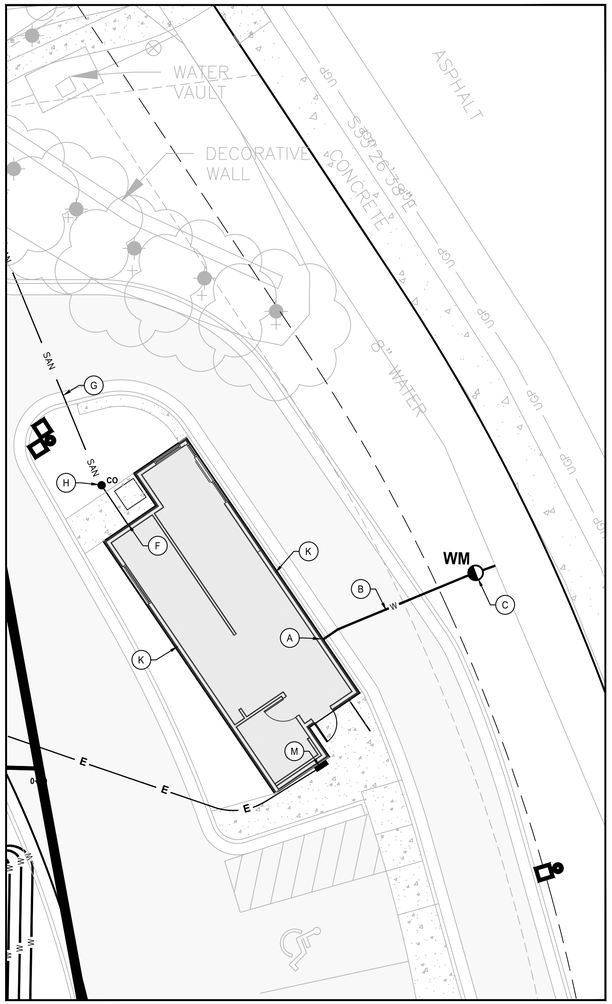
SUMMIT ORCHARDS - SWIG

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS

DRAINAGE AREA MAP & CALCS





10 0 5 10 20

(IN FEET)
1 inch = 10 ft.

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH SUPERSTAR HOLDINGS, LLC PRIOR TO BEGINNING UNDERGROUND UTILITIES TO VERIFY SPECIFIC TENANT REQUIREMENTS SUCH AS DOMESTIC WATER, WATER METER AND FIRE LINE SIZES, CONDUITS TO / FROM MESSAGE BOARDS, AND GROUND LOOP DETECTION SYSTEMS.

2. SANITARY SEWER CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTSIDE BOTTOM OF THE WATER MAIN AND THE OUTSIDE TOP OF THE SANITARY SEWER. MAINTAIN EIGHTEEN INCHES (18") MINIMUM SEPARATION FROM THE TOP OF THE SANITARY SEWER TO THE BOTTOM OF THE WATER MAIN. WHEN WATER LINE GOES UNDER A SANITARY SEWER THEN THE SANITARY SEWER SHOULD BE PRESSURE RATED PIPE OR ENCASED IN CONCRETE.

KEY LEGEND

- (A) DOMESTIC WATER ENTRY (RE: MEP)
- (B) 1" DOMESTIC WATER LINE (CONFIRM WITH MEP PRIOR TO INSTALLATION)
- (C) 1" WATER METER AND METER PIT
- (D) GAS ENTRY (RE: MEP)
- (E) GAS LINE (RE: SPIRE OR MEP FOR GAS SIZE AND MATERIAL)
- (F) SANITARY SEWER ENTRY (RE: MEP)
- (G) 6" SANITARY SEWER LINE (2% MIN. SLOPE)
- (H) CLEANOUT
- (I) PHONE / DATA SERVICE ENTRY (RE: ARCH)
- (J) ELECTRICAL TRANSFORMER (RE: MEP)
- (K) DOWNSPOUT (RE: ARCH) (SEE DOWNSPOUT DRAIN DETAIL)
- (L) 6" PVC DOWNSPOUT STORM LINE
- (M) ELECTRICAL ENTRY
- (N) 1" IRRIGATION METER AND LINE

NORTH

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

AGC Engineers, INC.
405 S. Leonard St., Suite D
Liberty, Missouri 64068
816.781.4200 ■
fax 792.3666
www.agcengineers.com

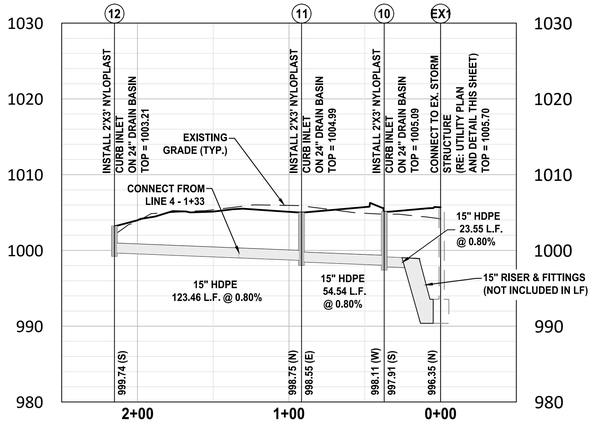
STATE OF MISSOURI
RONALD L. COWGER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
UTILITY PLAN

10

LINE 1



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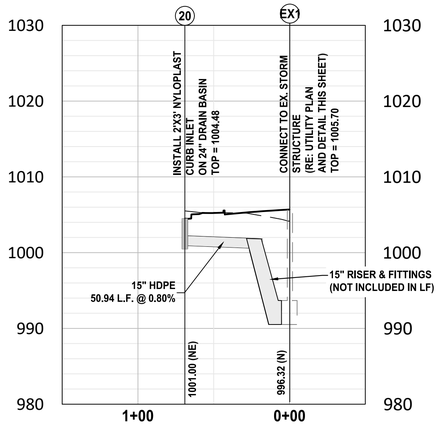
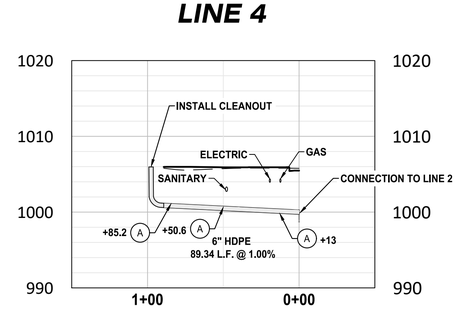


LINE 3 NOT USED

LINE 4



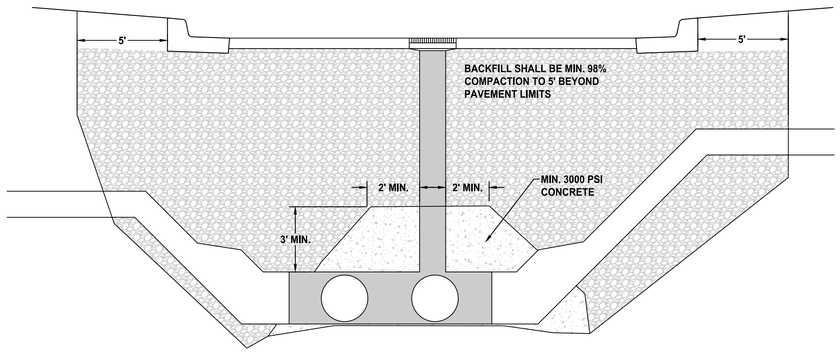
NOTES:

1. CONTRACTOR SHALL COORDINATE WITH SUPERSTAR HOLDINGS, LLC PRIOR TO BEGINNING UNDERGROUND UTILITIES TO VERIFY SPECIFIC TENANT REQUIREMENTS SUCH AS DOMESTIC WATER, WATER METER AND FIRE LINE SIZES, CONDUITS TO / FROM MESSAGE BOARDS, AND GROUND LOOP DETECTION SYSTEMS.

2. SANITARY SEWER CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTSIDE BOTTOM OF THE WATER MAIN AND THE OUTSIDE TOP OF THE SANITARY SEWER. MAINTAIN EIGHTEEN INCHES (18") MINIMUM SEPARATION FROM THE TOP OF THE SANITARY SEWER TO THE BOTTOM OF THE WATER MAIN. WHEN WATER LINE GOES UNDER A SANITARY SEWER THEN THE SANITARY SEWER SHOULD BE PRESSURE RATED PIPE OR ENCASED IN CONCRETE.

KEY LEGEND

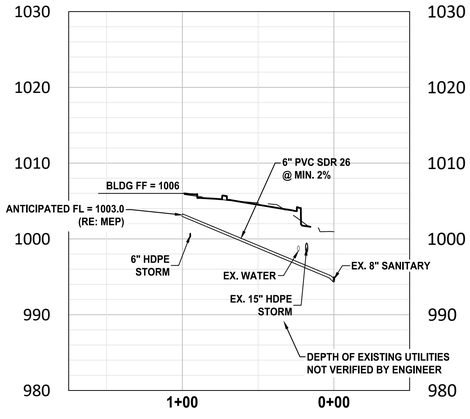
(A) DOWNSPOUT CONNECTION



CONNECTION TO EXISTING STORM STRUCTURE

NOT TO SCALE

LINE A



BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

10 0 5 10 20
(VERT. IN FEET)
1 inch = 10 ft.

50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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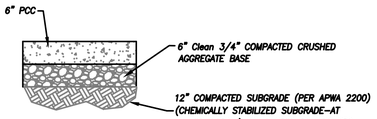
SUMMIT ORCHARDS - SWIG

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS

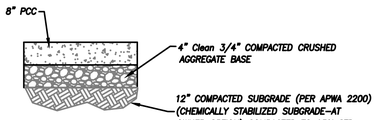
UTILITY PROFILES

11



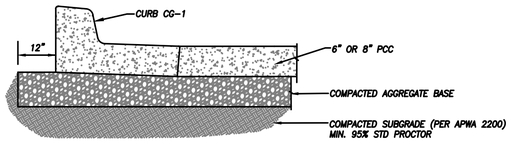
NORMAL DUTY CONCRETE SECTION

NOT TO SCALE



HEAVY DUTY CONCRETE SECTION

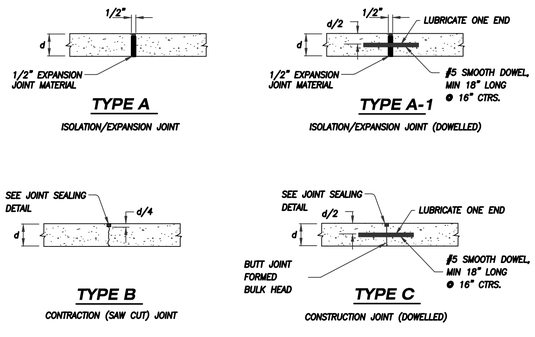
NOT TO SCALE



- EXTEND BASE SECTION 12" BEHIND CURB
- SEE PAVEMENT SECTIONS FOR TYPE & THICKNESS

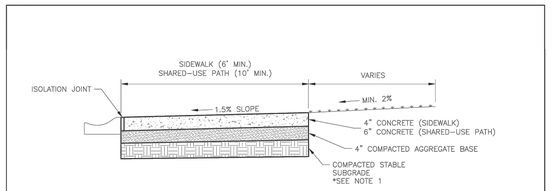
CURB & GUTTER BASE SECTION

NOT TO SCALE

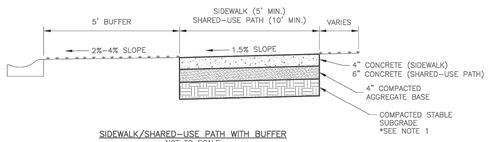


CONCRETE JOINT DETAILS

NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE

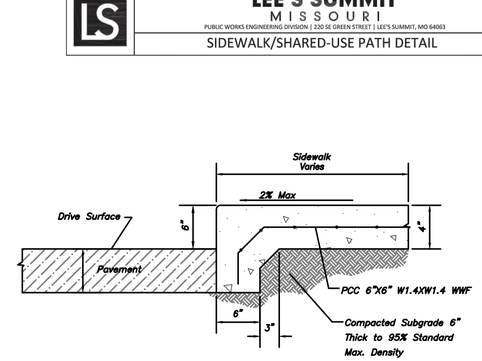


SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

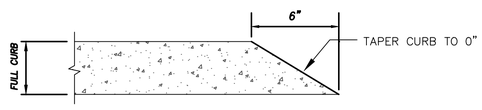
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 100 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LS	**LEE'S SUMMIT** MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 SIDEWALK/SHARED-USE PATH DETAIL	Date: 05/2021 Drawn By: MJF Checked By: DL GEN-2



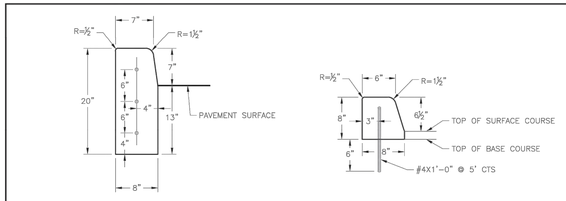
INTEGRAL SIDEWALK / CURB DETAIL

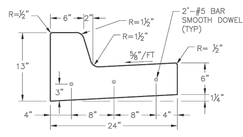
NOT TO SCALE

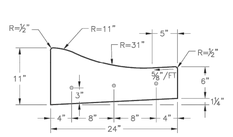


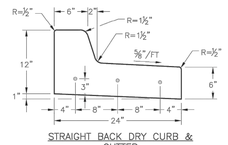
CURB TERMINATION DETAIL

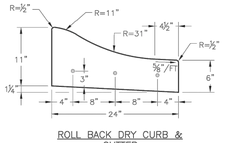
NOT TO SCALE

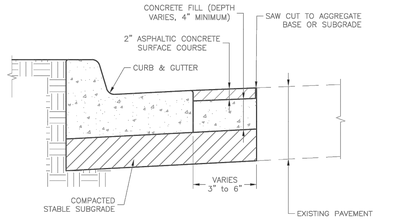












CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

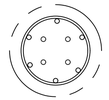
LS **LEE'S SUMMIT** MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

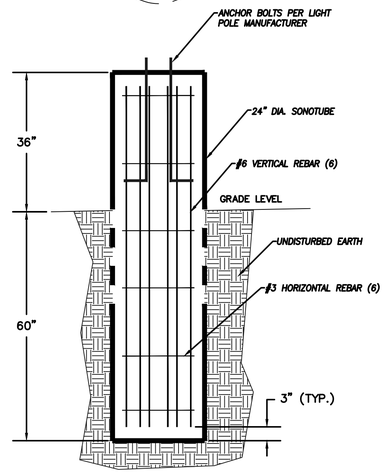
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Plot/Ltr: Date/Initials:

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

GEN-4

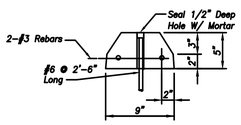


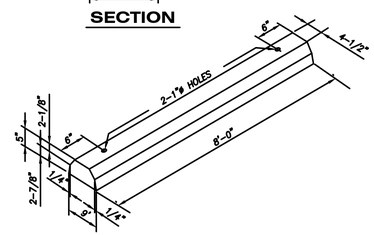


CONDUIT PER ELECTRICAL DESIGN
CONCRETE SHALL BE 4000 PSI MIN.

CONCRETE LIGHT POLE BASE DETAIL FOR POLE < 15 FOOT

NOT TO SCALE





PRECAST CONCRETE WHEEL STOP

NOT TO SCALE

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

AGC Engineers, INC.
405 S. Leonard St., Suite D
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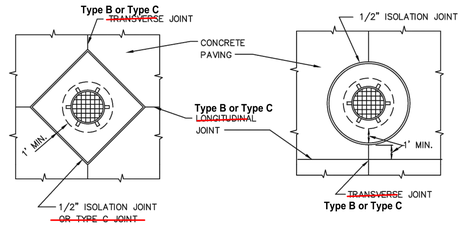
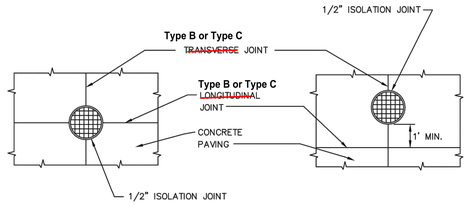
STATE OF MISSOURI
RONALD L. COWNER
NUMBER PE-29705
2-17-23
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

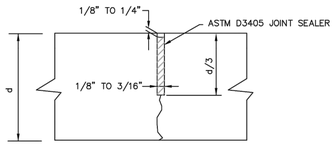
SITE DEVELOPMENT PLANS
DETAILS

12





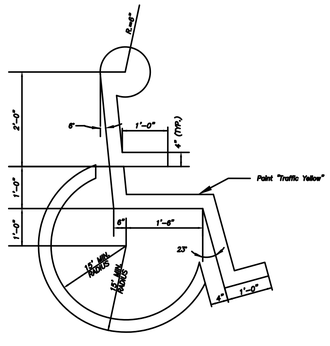
CONCRETE PAVING ISOLATION JOINTS



TYPICAL SECTION

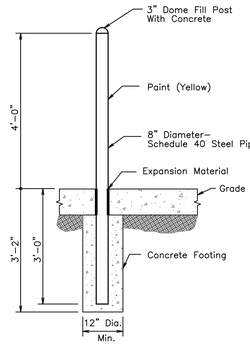
NOTES:
1. JOINT SEALING MATERIAL SHALL CONFORM TO ASTM D3405 AND SHALL BE APPLIED IN ACCORDANCE WITH MATERIAL MANUFACTURER'S RECOMMENDATIONS.
2. d = DEPTH OF SLAB

CONCRETE PAVING JOINT SEALING



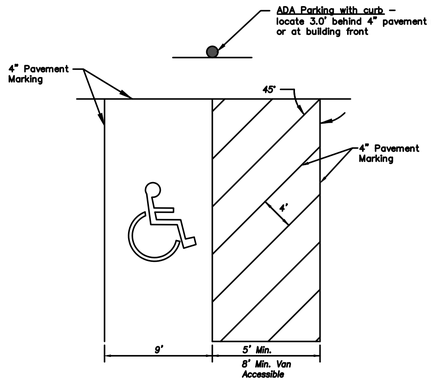
ACCESSIBLE PARKING SYMBOL

NOT TO SCALE



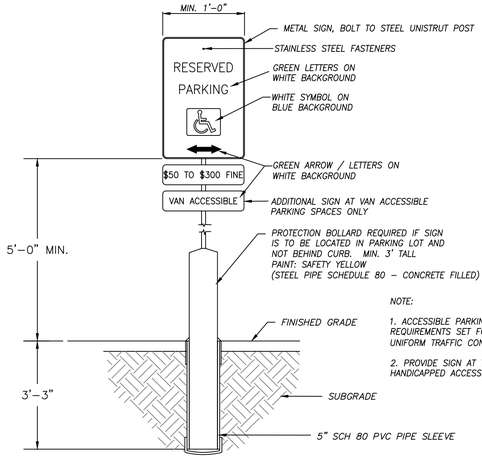
BOLLARD

NOT TO SCALE



ADA ACCESSIBLE STRIPING LAYOUT

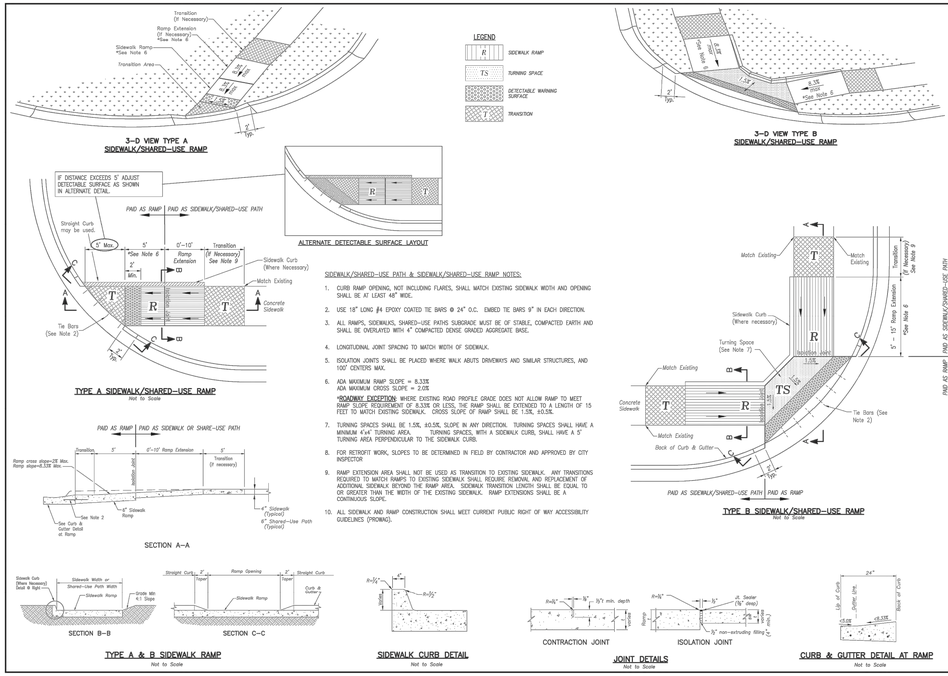
NOT TO SCALE



NOTE:
1. ACCESSIBLE PARKING SIGNS SHALL MEET THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (R7-8).
2. PROVIDE SIGN AT THE HEAD OF EACH HANDICAPPED ACCESSIBLE PARKING STALL.

HANDICAP BOLLARD / SIGN

NOT TO SCALE



SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

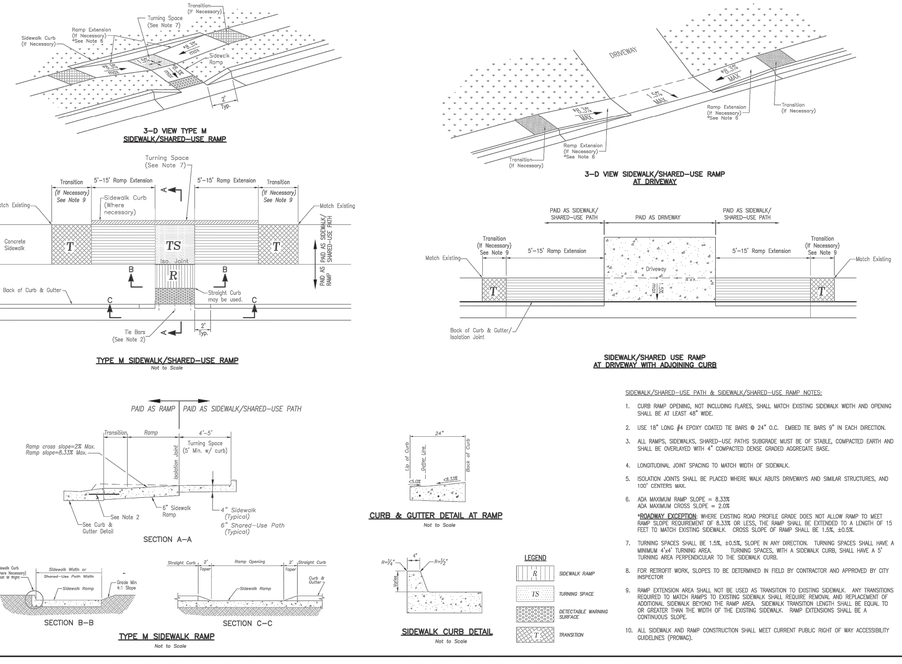
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DS
Date: 05/2023
Proj. #:

GEN-3A



SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

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LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DS
Date: 05/2023
Proj. #:

GEN-3B

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

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STATE OF MISSOURI
RONALD L. COWDER
NUMBER
PE-2010035
2-17-23
PROFESSIONAL ENGINEER

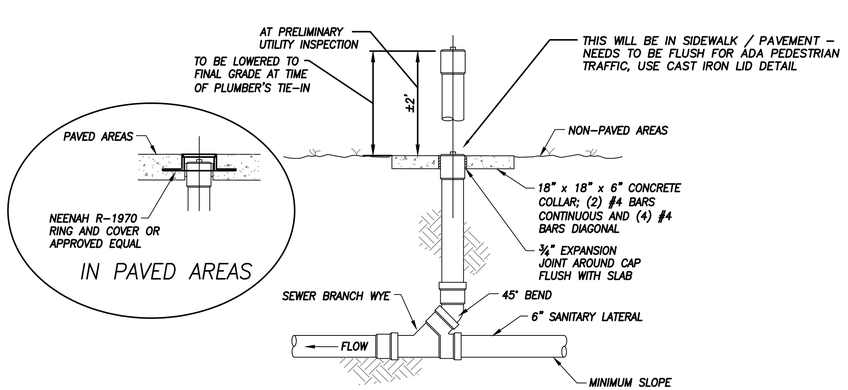
SUMMIT ORCHARDS - SWIG

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS

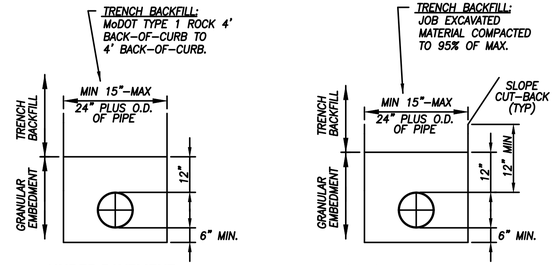
DETAILS

13



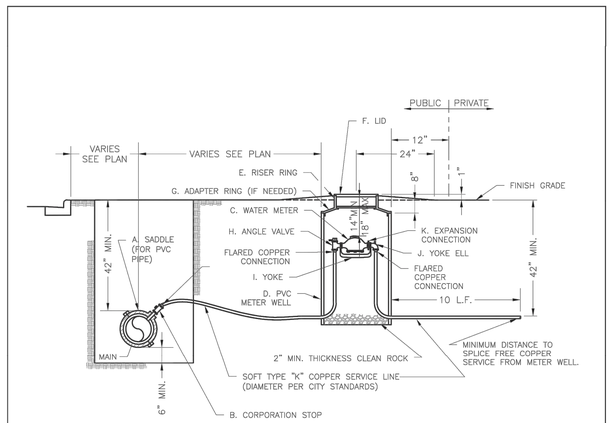
CLEAN-OUT DETAIL

NOT TO SCALE



EMBEDMENT AND BACKFILL FOR SANITARY SEWERS

NOT TO SCALE



NOTES:

1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A-K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

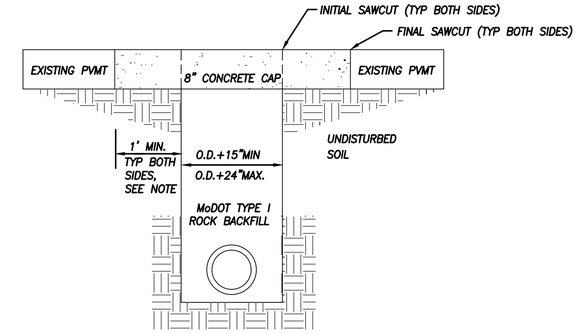
LS

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION WITH METER WELL

Date: 06/2015
Drawn By: JN
Checked By: DL

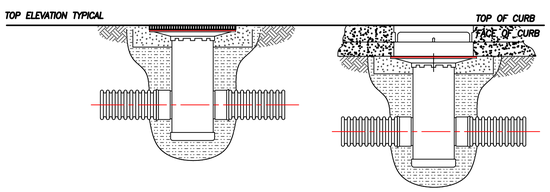
WAT-11



NOTE:
MINIMUM 1 foot BOTH SIDES OF ACTUAL TRENCH WIDTH SHALL NOT BE REMOVED UNTIL THE TRENCH HAS BEEN FILLED AND COMPACTED.

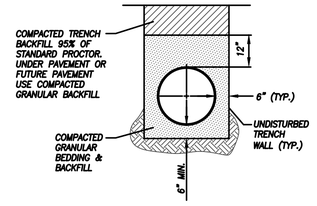
STREET CROSSING RESTORATION DETAIL

NOT TO SCALE



CONSTRUCTION STAKING DETAIL - NYLOPLAST CURB INLET / DRAIN BASIN

NOT TO SCALE



SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER
H25 (FLEXIBLE PAVEMENT)	12" (24" FOR 60" PIPE)*
H25 (RIGID PAVEMENT)	12" (24" FOR 60" PIPE)
E80 RAILWAY	24"
HEAVY CONSTRUCTION	48"

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION: AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING WOVEN GEOTEXTILE FABRIC.

2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4"; FOR 4"-24" DIA. HDPE; 6" FOR 30"-60" DIA. HDPE.

3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

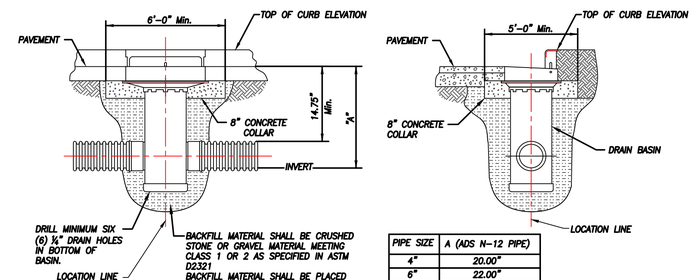
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL DIA.	MIN. RECOMMENDED TRENCH WIDTH
4	21
6	23
8	25
10	28
12	31
15	34
18	39
24	48
30	66
36	78
42	83
48	89
60	102

5. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE PIPE TO THE GROUND SURFACE.

HDPE (HIGH DENSITY POLYETHYLENE) PIPE INSTALLATION DETAIL

NOT TO SCALE



PIPE SIZE	A (ADS N-12 PIPE)
4"	20.00"
6"	22.00"
8"	24.00"
10"	26.00"
12"	29.00"
15"	32.00"
18"	35.00"
24"	42.00"
30"	48.00"

NYLOPLAST DRAIN BASIN - TYPICAL INSTALLATION

NOT TO SCALE

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RONALD L. COWSER
NUMBER PE-29705
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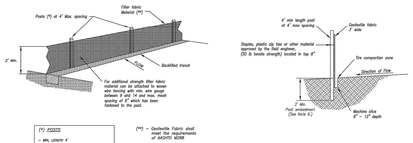
PROFESSIONAL ENGINEER

SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
DETAILS

14



(*) SIZING
- MIN. LENGTH 4'
- MATERIALS 1 ¼" x 1 ¼"
- W.I.S. SQUARING TYPE 2 ¼" x 2 ¼"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS
Not to Scale

Notes:
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be broken to 100', flows should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where strong machine cannot be reasonably used.

Maintenance:
1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

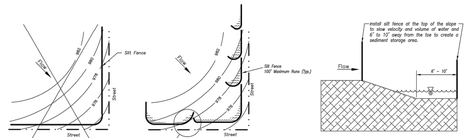
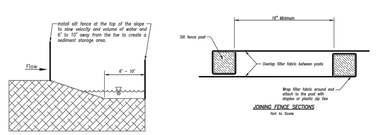


Figure A

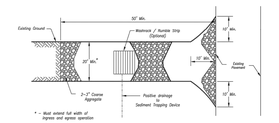
SILT FENCE LAYOUT
Not to Scale



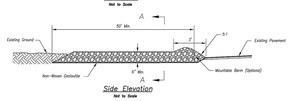
JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

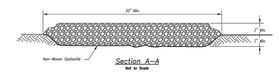
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03 ADOPTED 10/24/2016



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

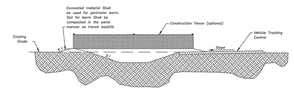
Notes for Construction Entrance:
1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 50' from the edge of the public road to divert runoff flow.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:
1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

Notes for Concrete Washout:
1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes of the pit shall be no steeper than 3:1 (H:V). The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout, and shall elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump trucks.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit to sweep or gravelly soils.

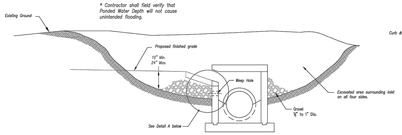
Maintenance for Concrete Washout:
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, washed pieces of concrete and all other debris shall be disposed of in accordance with all laws for the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with clean soil, compacted and stabilized. All other disturbances associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

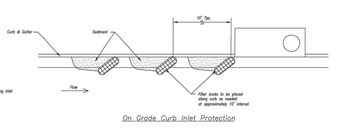


CONCRETE WASHOUT

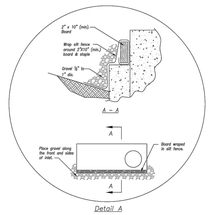
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01 ADOPTED 10/24/2016





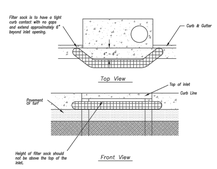
On Grade Curb Inlet Protection



EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:
1. Immediately following inlet construction and prior to construction of curb and inlet throat, place silt fence around the inlet in a 3' to 5' radius (as shown) or as directed. Structures which have accumulated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Once widths are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:
1. Remove deposited sediment from excavated storage area when available storage has been reduced by 50%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED 10/24/2016

BY	REVISION	DATE
RC/ACA	FOR REVIEW	2-17-23

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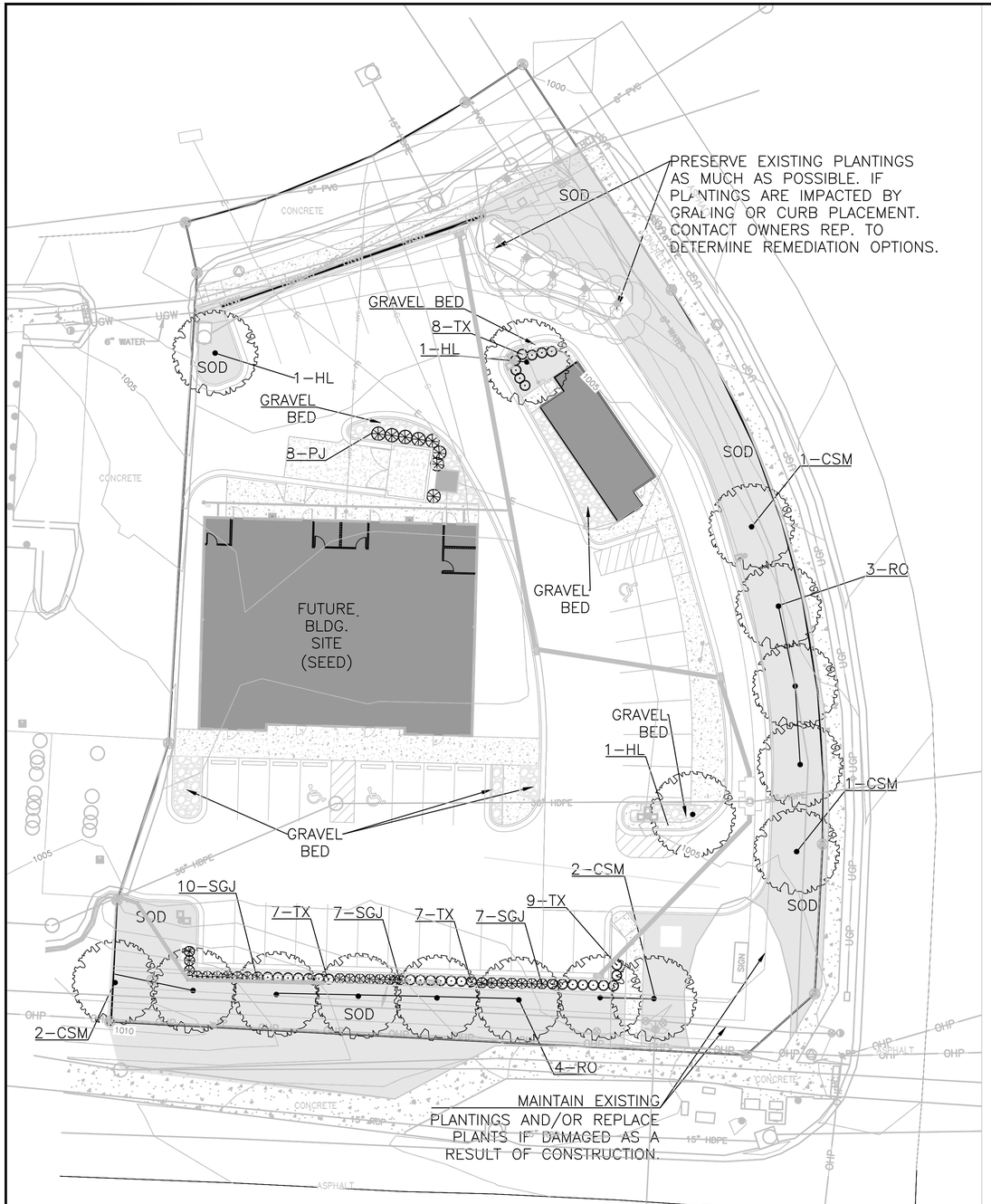
SUMMIT ORCHARDS - SWIG
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS
DETAILS

15



GRAPHIC SCALE

North

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

IRRIGATION PERFORMANCE SPECIFICATION:

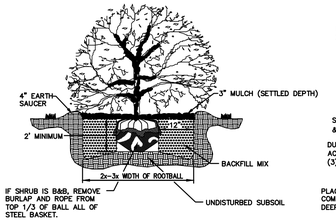
THE FOLLOWING CRITERIA SHALL BE CONSIDERED MINIMUM STANDARDS FOR DESIGN AND INSTALLATION OF LANDSCAPE IRRIGATION SYSTEM:

1. GENERAL – IRRIGATION SYSTEM TO INCLUDE DRIP IRRIGATION OF SHRUB BEDS ADJACENT TO BUILDINGS, SPRAY HEADS IN THE PARKING ISLANDS, AND ROTORS AROUND THE PERIMETER OF THE PARKING LOTS. HEADS SHALL THROW AWAY FROM BUILDING AND AVOID SPRAYING OVER SIDEWALKS.
2. IRRIGATION SYSTEM SHALL CONFORM TO ALL INDUSTRY STANDARDS AND ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING DESIGN AND INSTALLATION.
3. WATER LINE TYPE, SIZE LOCATION, PRESSURE AND FLOW SHALL BE FIELD VERIFIED PRIOR TO SYSTEM DESIGN AND INSTALLATION.
4. ALL MATERIALS SHALL BE FROM NEW STOCK FREE OF DEFECTS AND CARRY A MINIMUM ONE YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
5. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN SUCH A WAY THAT ALL SYSTEM COMPONENTS OPERATE WITHIN THE GUIDELINES ESTABLISHED BY THE MANUFACTURER.
6. LAWN AREA AND SHRUB BEDS SHALL BE ON SEPARATE CIRCUITS.
7. PROVIDE WATER TAP, METER SET, METER VAULT AND ALL OTHER OPERATIONS NECESSARY TO PROVIDE WATER FOR IRRIGATION SHALL CONFORM TO LOCAL WATER GOVERNING AUTHORITY GUIDELINES AND STANDARDS.
8. BACKFLOW PREVENTION SHALL BE PROVIDED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
9. IRRIGATION CONTROLLER TO BE LOCATED IN UTILITY ROOM INSIDE BUILDING, AS IDENTIFIED BY OWNER.
10. IRRIGATION CONTROLLER STATIONS SHALL BE LABELED TO CORRESPOND WITH THE CIRCUIT IT CONTROLS.
11. CONTRACTOR SHALL PROVIDE TO THE OWNER WRITTEN OPERATION INFORMATION FOR ALL SYSTEM COMPONENTS.
12. CONTRACTOR SHALL PROVIDE TO THE OWNER ALL KEYS, ACCESS TOOLS, WRENCHES AND ADJUSTING TOOLS NECESSARY TO GAIN ACCESS, ADJUST AND CONTROL THE SYSTEM.
13. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
14. AN AUTOMATIC RAIN SHUT-OFF OR MOISTURE DEVICE SHALL BE INSTALLED.
15. INSTALL SCHEDULE 40 PVC SLEEVES UNDER ALL CURBS, PAVING AND SIDEWALKS. SLEEVES TO BE TWICE THE SIZE OF THE LINE IT HOUSES.
16. INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN TO ALLOW GRAVITY DRAINING OF MAIN DURING WINTER MONTHS. PROVIDE QUICK COUPLERS AT MULTIPLE LOCATIONS TO ALLOW FOR EASY "BLOWING OUT" OF LATERAL AND MAIN LINES.
17. ZONES OR NOZZLES SHALL BE DESIGNED WITH MATCHED PRECIPITATION RATES.
18. MINIMUM LATERAL DEPTH IS 15" AND MAIN DEPTH IS 18".
19. SUBMIT DESIGN DRAWING WITH BID TO ALLOW OWNER TO EVALUATE SYSTEM. INCLUDE CUT SHEETS OF ALL COMPONENTS AND ZONE TABLE ILLUSTRATING FLOWS AND ANTICIPATED PRESSURE AT FURTHEST HEAD.
20. AN "AS-BUILT" SCALED DRAWING SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
    - AS CONSTRUCTED LOCATION OF ALL COMPONENTS
    - COMPONENT NAME, MANUFACTURER, MODEL INFORMATION, SIZE AND QUANTITY
    - PIPE SIZE AND QUANTITY
    - INDICATION OF SPRINKLER HEAD SPRAY PATTERN
    - CIRCUIT IDENTIFICATION SYSTEM
    - DETAILED METHOD OF WINTERIZING SYSTEM

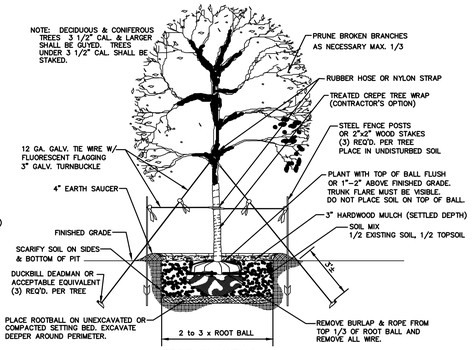
SUBMIT AS-BUILT DRAWING IN FULL SIZE DRAWING FORM AS WELL AS PDF ELECTRONIC FORMAT. (SCANNING FULL SIZE COPY OF PLAN IS ACCEPTABLE IF IT CAN BE PRINTED TO SCALE)

LANDSCAPING NOTES:

1. LOCATE ALL UTILITIES BEFORE LANDSCAPE CONSTRUCTION BEGINS.
2. NOTIFY OWNER REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES.
3. ALL EXTERIOR GROUND WITHIN THE LIMITS OF THE CONTRACT, EXCEPT FOR SURFACES OCCUPIED BY BUILDINGS, STRUCTURES,PAVING, AND AS DIRECTED ON THE DRAWINGS AS UNDISTURBED, SHALL BE FILLED WITH SIX INCHES (6") OF TOPSOIL.
4. ALL DISTURBED AREAS NOT DESIGNATED FOR OTHER PLANTING SHALL BE SODDED. SOD SHALL CONSIST OF 90% TURF TYPE TALL FESCUE 10% BLUEGRASS.
5. WEED MAT SHALL BE USED UNDER ALL PLANTING AREAS NOT TO BE SODDED OR AS DIRECTED ON THE DRAWINGS. THE MAT SHALL BE COVERED WITH MULCH AND SECURED IN-PLACE BY A SOIL ANCHOR.
6. QUANTITIES INDICATED IN PLANT LIST ARE FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PLANT QUANTITIES AS ILLUSTRATED ON THE PLAN.
7. SHREDDED HARDWOOD MULCH SHALL BE USED AS THREE INCH (3") TOP DRESSING IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF SAUCER OR LANDSCAPE ISLAND (SEE PLANTING DETAILS).
8. PROVIDE STEEL EDGING AROUND ALL SHRUB AND GROUNDCOVER BEDS. STEEL EDGING SHALL BE 1/8" x 4" WITH CLIPS AND REBAR STAKES FIVE FEET(5') ON CENTER.
9. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME-RELEASE FERTILIZER(3-4 SLOW-RELEASE TABLETS/PELLETS).
10. IF LEANING OCCURS WITHIN ONE YEAR, TREES SHALL BE RE-STAKED (SEE PLANTING DETAILS).
11. CONTRACTOR SHALL STAKE ALL PLANT MATERIALS PRIOR TO INSTALLATION FOR THE PURPOSE OF DETERMINING CONFLICTS WITH ROCK, UTILITIES, ETC. NO PLANTS CAN BE PLANTED DIRECTLY ON ROCK OR UTILITIES. NOTIFY ARCHITECT/ENGINEER/OWNER AT ONCE IF ANY CONFLICTS OCCUR. CONTRACTOR WILL BE REQUIRED TO ADJUST PLANT LOCATIONS AT NO ADDITIONAL COST.
12. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL SOD UNTIL ROOTS HAVE KNOTTED INTO SOIL AND OWNER HAS OCCUPIED THE BUILDING.
13. PROVIDE "GATOR" BAGS ON ALL TREES. REFILL AS NECESSARY UNTIL OWNER OCCUPIES THE BUILDING.
14. PROVIDE ROLLED EROSION CONTROL MAT, NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL OVER ALL NATIVE GRASS SEEDED AREAS.
15. GRAVEL BEDS – PROVIDE AND INSTALL HEAVY DUTY WEED BARRIER FABRIC UNDER GRAVEL. PROVIDE AND INSTALL 3" DEPTH OF 1"-2" MULTI-COLORED WASHED RIVER GRAVEL, SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL.



SHRUB PLANTING
NOT TO SCALE



TREE PLANTING
NOT TO SCALE

PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE/REMARKS
TREES				
CSM	6	ACER SACHARUM 'AUTUMN SPLENDOR'	CADDO SUGAR MAPLE	3" CAL. B&B
HL	3	GLEDITSIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	3" CAL. B&B
RO	7	QUERCUS RUBRA	RED OAK	3" CAL. B&B
PJ	8	JUNIPEROUS CHINENSIS 'PERFECTA'	PERFECTA JUNIPER	6' HT. B&B
SHRUBS/GRASSES/GROUNDCOVER				
SGJ	24	JUNIPEROUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	5 GAL
TX	31	TAXUS x MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	5 GAL

LANDSCAPE WORKSHEET

	ORDINANCE REQUIREMENT	REQUIRED FOR THIS SITE	PROPOSED (EXISTING AND NEW LANDSCAPE)
8.790.A.1 Street Frontage Trees (NW Chipman)	1 tree per 30 feet of street frontage	215 ft. of street frontage /30 = 8 trees required	8 trees
8.790.A.3 Street Frontage Shrubs (NW Chipman)	1 shrub per 20 feet of street frontage	215 ft. of street frontage /20 = 11 shrubs required	11 shrubs *
8.790.A.2 Street Frontage Green Strip (NW Chipman)	20 feet	20 feet	20 feet
8.790.B.1 Open Yard Shrubs	2 shrubs per 5000 sq. ft. of total lot area excluding building footprint.	20,452 sq.ft. of total lot area minus 678 sq.ft. of bldg. = 19,774/5,000 x 2 = 8 shrubs.	8 shrubs
8.790.B.3 Open Yard Trees	1 tree per 3000 sq. ft. of total lot area excluding building and parking.	20,452 sq.ft. of total lot area minus 678 sq.ft. of bldg. 19,774/3,000 = 7 trees.	7 trees
8.810. Parking Lot Landscape Islands	5% of entire parking area (spaces, aisles & drives); 1 island at end of every parking bay, min. 9' wide	18,707 sq.ft. of parking area x .05 = 935 sq.ft. of landscape parking lot islands required	1,008 sq.ft.
8.820 Screening of Parking Lot, NW Chipman	12 shrubs per 40 linear feet (must be 2.5 feet tall; berms may be combined with shrubs)	120 linear feet/40 x 12 = 36 shrubs required.	36 shrubs

BY	REVISION	DATE
--	--	--
--	--	--
--	--	--
--		--
VSR	OWNER CHANGES	2/16/23
VSR	SITE DEVELOPMENT PLAN	1.27.2023

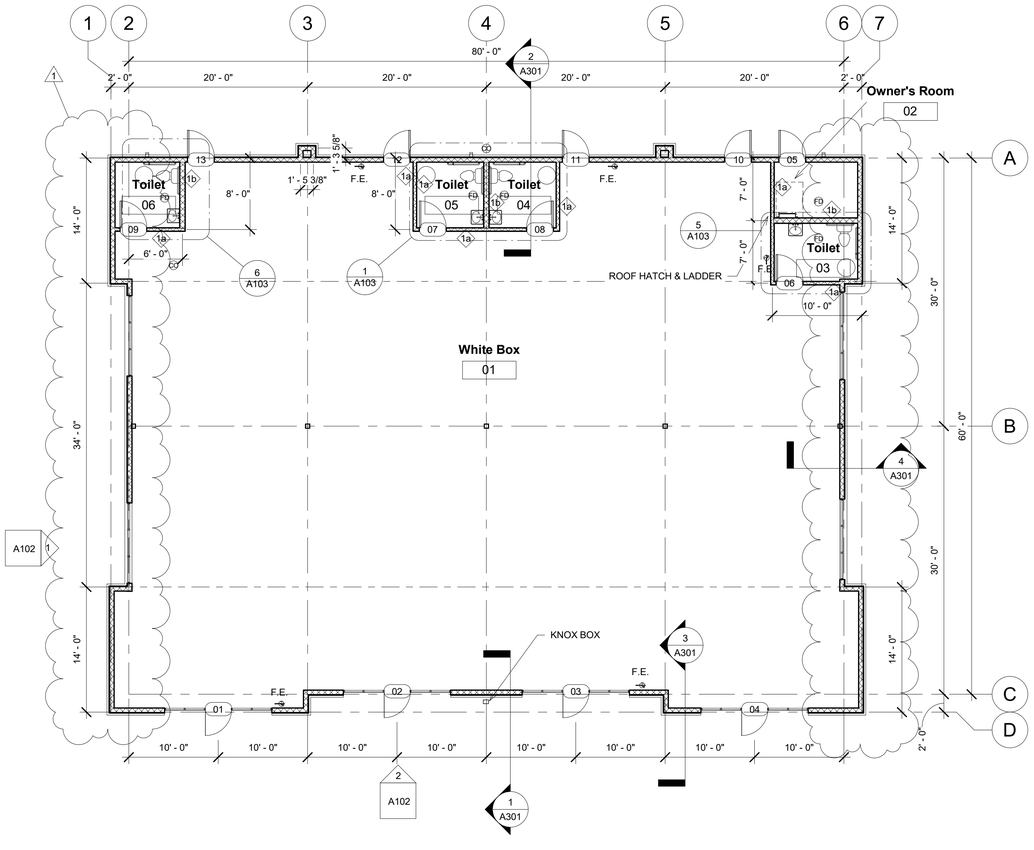
STATE OF MISSOURI
VANCE S. RZEPKA
NUMBER LA-000144
LANDSCAPE ARCHITECT
2/17/23

SUMMIT ORCHARDS-SWIG

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

LANDSCAPE PLAN

LS101



1 Floor Plan
1/8" = 1'-0"

BUILDING CODE SUMMARY

APPLICABLE CODES
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2017 NATIONAL ELECTRICAL CODE
2017 ICC/ANSI A117.1

SUMMARY OF WORK
NEW SHELL SPEC BUILDING. NO C.O. IS REQUESTED WITH THIS SUBMITTAL. SEPARATE TENANT FINISH PLANS WILL BE SUBMITTED FOR EACH SPACE AT A LATER DATE.

FIRE SUPPRESSION SUMMARY
NONE

OCCUPANCY CLASSIFICATION
M (RETAIL) & B (OFFICE)

TYPE OF CONSTRUCTION
V-B, NON - SPRINKLED

FLOOR AREA
BUILDING AREA: 5,110 SQ.FT.

OCCUPANT LOAD
TO BE DETERMINED

EXITS REQUIRED
TO BE DETERMINED

EXITS PROVIDED
TWO PER SPACE

TOILET FACILITIES REQUIRED
TO BE DETERMINED

TOILET FACILITIES PROVIDED
ONE UNISEX TOILET PER SPACE (ADA

DEFERRED SUBMITTALS TO BE COMPLETED BY OTHERS
ROOF TRUSS PLANS (PLANS BY SUBCONTRACTOR)

INTERIOR FINISH REQUIREMENTS
FLOOR FINISHES: CLASS I or CLASS II
WALL FINISHES: CLASS A (non-sprinkled)
CEILING FINISHES: CLASS A (non-sprinkled)

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

PREMISES SHALL BE IDENTIFIED ON ALL EXTERIOR DOORS, WITH NUMBERS AND/OR LETTERS. EACH CHARACTER SHALL BE NOT LESS THAN 6" HIGH WITH A MINIMUM STROKE WIDTH OF 1.0" INCHES. THEY SHOULD BE INSTALLED ON A CONTRASTING BACKGROUND. STREET FACING DOORS SHALL HAVE ADDRESSES THAT ARE PLAINLY LEGIBLE AND VISIBLE FROM THE STREET FRONTING THE PROPERTY. ADDRESS NUMBERS AND/OR LETTERS SHALL BE ARABIC NUMBERS OR ALPHABETIC LETTERS.

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFRY SCHROEDER
NUMBER A-4226
3/23/23
REGISTERED ARCHITECT

No.	Description	Date
1	City Comments	3.23

Revision Schedule

Floor Plan

Project number 2491
Date 03.01.2023

A101

Scale 1/8" = 1'-0"

3/24/2023 11:26:11 AM

Door Schedule					
Number	Family	Type	hardware type	Door type	Frame Type
01	Storefront Entry Single	3'.0" x 7'.0"		AL	AL
02	Storefront Entry Single	3'.0" x 7'.0"		AL	AL
03	Storefront Entry Single	3'.0" x 7'.0"		AL	AL
04	Storefront Entry Single	3'.0" x 7'.0"		AL	AL
05	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep	HM	HM
06	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer	WD	HM
07	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer	WD	HM
08	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer	WD	HM
09	Single-Flush	3 x 7 Toilet	Latchset w/ lever handles, strike plate, 1 1/2 pair hinges, closer	WD	HM
10	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep	HM	HM
11	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep	HM	HM
12	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep	HM	HM
13	Single-Flush	3 x7 Exterior	Lockset w/ lever handles, strike plate, 1 1/2 pair hinges, closer, drip cap, gasketing, bottom sweep	HM	HM

HM = 16 GA. HOLLOW METAL, PAINTED
WD = SOLID CORE RED OAK, STAINED
AL = ANODIZED ALUMINUM
IRP = IMPACT RESISTANT PLASTIC

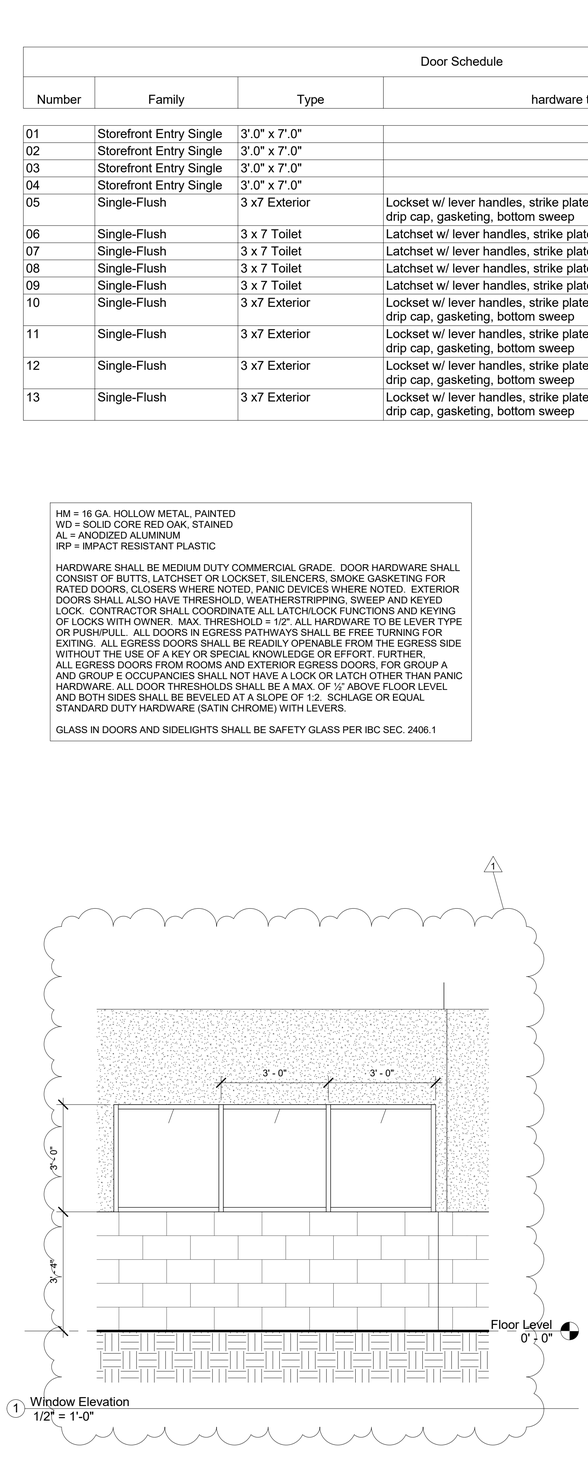
HARDWARE SHALL BE MEDIUM DUTY COMMERCIAL GRADE. DOOR HARDWARE SHALL CONSIST OF BUTTS, LATCHSET OR LOCKSET, SILENCERS, SMOKE GASKETING FOR RATED DOORS, CLOSERS WHERE NOTED, PANIC DEVICES WHERE NOTED. EXTERIOR DOORS SHALL ALSO HAVE THRESHOLD, WEATHERSTRIPPING, SWEEP AND KEYED LOCK. CONTRACTOR SHALL COORDINATE ALL LATCH/LOCK FUNCTIONS AND KEYING OF LOCKS WITH OWNER. MAX. THRESHOLD = 1/2". ALL HARDWARE TO BE LEVER TYPE OR PUSH/PULL. ALL DOORS IN EGRESS PATHWAYS SHALL BE FREE TURNING FOR EXITING. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. FURTHER, ALL EGRESS DOORS FROM ROOMS AND EXTERIOR EGRESS DOORS, FOR GROUP A AND GROUP E OCCUPANCIES SHALL NOT HAVE A LOCK OR LATCH OTHER THAN PANIC HARDWARE. ALL DOOR THRESHOLDS SHALL BE A MAX. OF ½" ABOVE FLOOR LEVEL AND BOTH SIDES SHALL BE BEVELED AT A SLOPE OF 1:2. SCHLAGE OR EQUAL STANDARD DUTY HARDWARE (SATIN CHROME) WITH LEVERS.

GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS PER IBC SEC. 2406.1

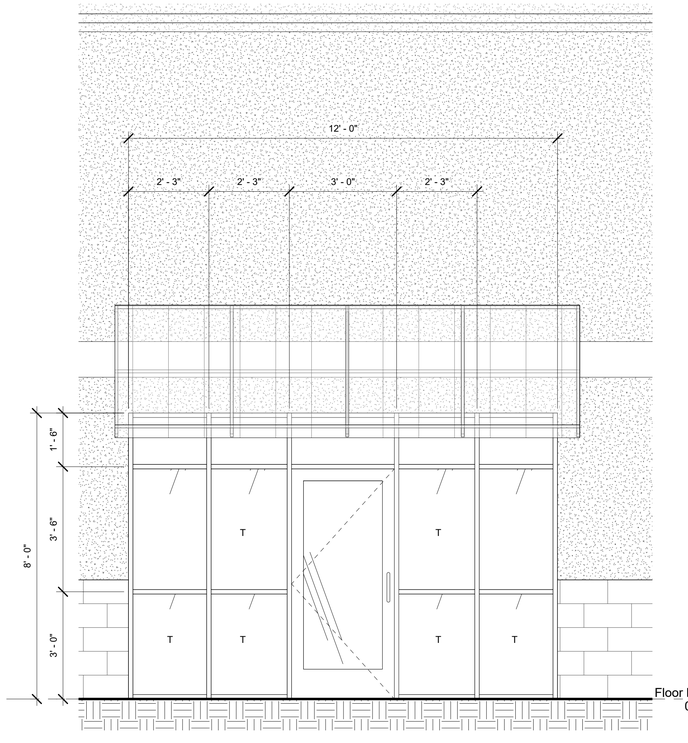
Wall Schedule			
Type Mark	Type	Type Comments	Function
1a	Interior Partition - Wood Stud	2x4 Wood studs @ 16" o.c. w/ 3 1/2" batt insulation and (1) layer 5/8" gyp. board each side. To 10'.0" aff	Interior
1b	Interior Partition -wet wall	2x6 Wood studs at 16" o.c. w/ 6" fiberglass batt insulation and (1) layer 5/8" gyp. board each side. To 10'.0" aff	Interior

Room Schedule					
Number	Name	Base Finish	Wall Finish	Floor Finish	Ceiling Finish
01	White Box	None	Painted gyp. b'd	Concrete	None
02	Owner's Room	None	Painted gyp. b'd	Concrete	2x4 Suspended Acoustical
03	Toilet	6" rubber cove	Epoxy Paint	LVT	2x4 Suspended Acoustical
04	Toilet	6" rubber cove	Epoxy Paint	LVT	2x4 Suspended Acoustical
05	Toilet	6" rubber cove	Epoxy Paint	LVT	2x4 Suspended Acoustical
06	Toilet	6" rubber cove	Epoxy Paint	Concrete	2x4 Suspended Acoustical

CEILING HEIGHT TO BE 9'.0" AFF

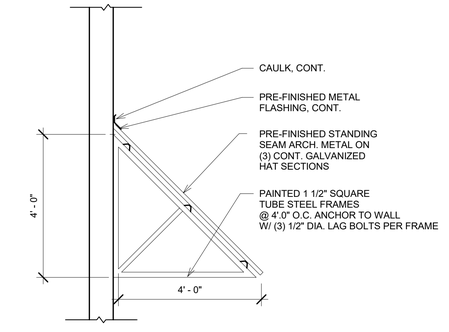


1 Window Elevation
1/2" = 1'-0"



T = TEMPERED GLASS

2 Entry Detail
1/2" = 1'-0"



3 Awning detail
1/2" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

JOSEPH A. TOWNS MO. LIC. E 22017
LORAC DESIGN GROUP
CERT. OF AUTHORITY E-2005032846-D

STATE OF MISSOURI
JEFFREY SCHROEDER
NUMBER A-4226
3/23/23
REGISTERED ARCHITECT

No.	Description	Date
1	City Comments	3.23

Revision Schedule

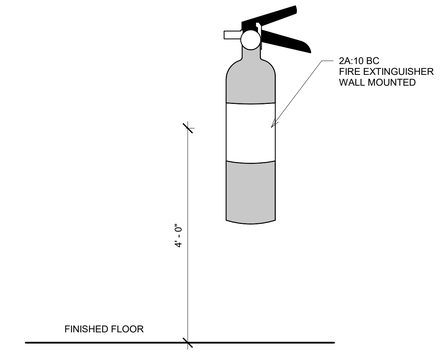
Architectural Details

Project number 2491
Date 03.01.2023

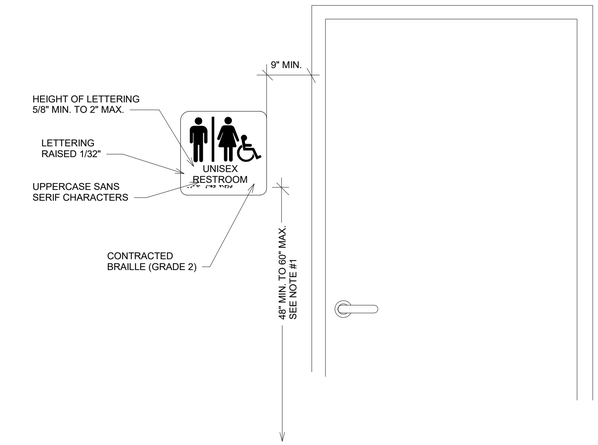
A102

Scale As indicated

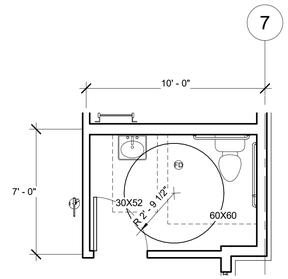
3/24/2023 11:26:13 AM



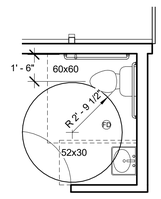
3 Fire Extinguisher Detail
3/4" = 1'-0"



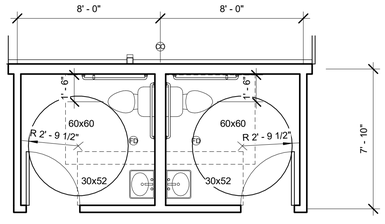
4 Unisex Handicapped toilet door detail
1/32" = 1'-0"



5 ADA Toilet Detail 1
1/4" = 1'-0"

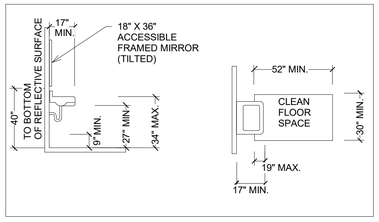


6 ADA Toilet Detail 2
1/4" = 1'-0"

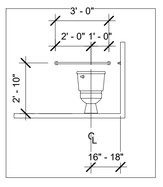


1 ADA Toilet Detail 3
1/4" = 1'-0"

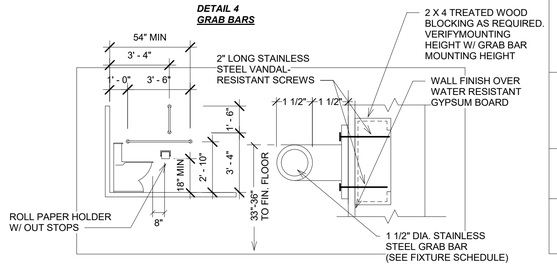
DETAIL 2
LAVATORIES



DETAIL 3
GRAB BARS



DETAIL 4
GRAB BARS



2 ADA Toilet Details 2017
1/4" = 1'-0"

SANITARY FACILITIES ICC/ANSI A117.1-2017

1.	***GENERAL*-PROVIDE SUFFICIENT SPACE IN THE BATHROOM FOR A WHEELCHAIR MEASURING 30" WIDE X 48" LONG TO ENTER THE ROOM AND PERMIT THE DOOR TO CLOSE. THERE SHALL BE ROOM FOR A 67" DIA. TURNING CIRCLE AS SHOWN ON PLAN. THE WATER CLOSET SHALL BE LOCATED IN A SPACE WHICH PROVIDES A 60" WIDE CLEAR SPACE FROM A FIXTURE OR A WALL AT ONE SIDE AND 60" OF CLEAR SPACE IN FRONT OF THE WATER CLOSET.**
2.	***DOORS*-SANITARY FACILITY DOORS SHALL HAVE AN AUTOMATIC CLOSING DEVICE & BE 3'.0" WIDE**
3.	***GRAB BARS*- GRAB BARS SHALL BE AS PER DETAIL 3 & 4 AND SHALL BE CAPABLE OF CARRYING 250 LBS PER FT.**
4.	***LAVATORY* - LAVATORY HEIGHTS AND CLEARANCES SHALL COMPLY WITH DETAIL 2. INSULATE HOT WATER AND DRAIN PIPES UNDER LAVATORIES. NO SHARP OR ABRASIVE SURFACES ARE ALLOWED UNDER LAVATORIES. FAUCET CONTROLS AND OPERATING MECHANISMS ARE REQUIRED TO BE OPERABLE WITH ONE HAND AND CAN NOT REQUIRE GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS IS NOT TO EXCEED 5 LB. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.**
5.	***ACCESSORIES* - IF MIRRORS, PAPER TOWEL, SANITARY NAPKIN, WASTE RECEPTACLES AND SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE IS TO BE LOCATED WITH BOTTOM MAX. 40 INCHES ABOVE THE FLOOR.**
6.	***FINISHES* - FLOOR FINISH SHALL BE VCT WITH 6" RUBBER COVE BASE. WALL FINISHES WILL BE EPOXY PAINT**
7.	***URINAL* - IF PROVIDED, URINAL LIP SHALL BE MAX. 17" ABOVE FLOOR WITH A CLEAR SPACE OF 30" WIDE X 52" IN FRONT OF URINAL.**

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFREY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
3/23/23

No.	Description	Date
	Revision Schedule	

Architectural Details

Project number 2491
Date 03.01.2023

A103

Scale As indicated

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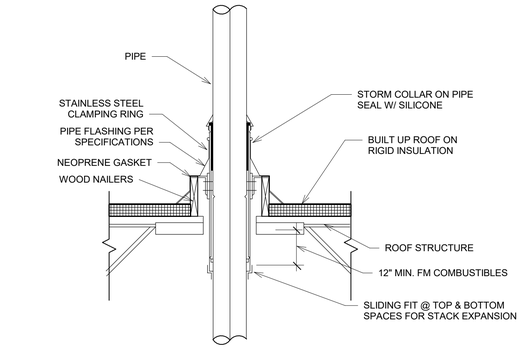
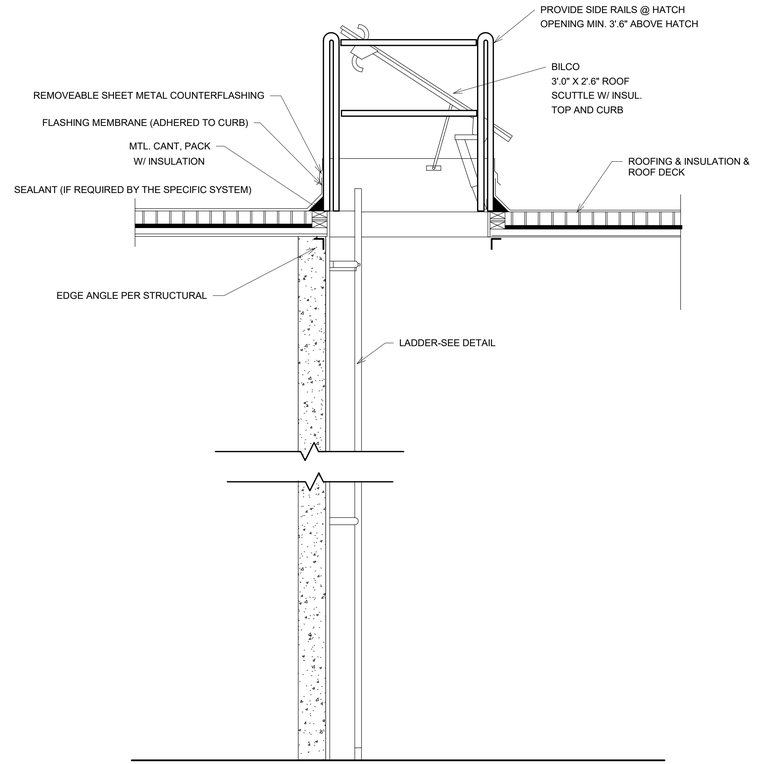
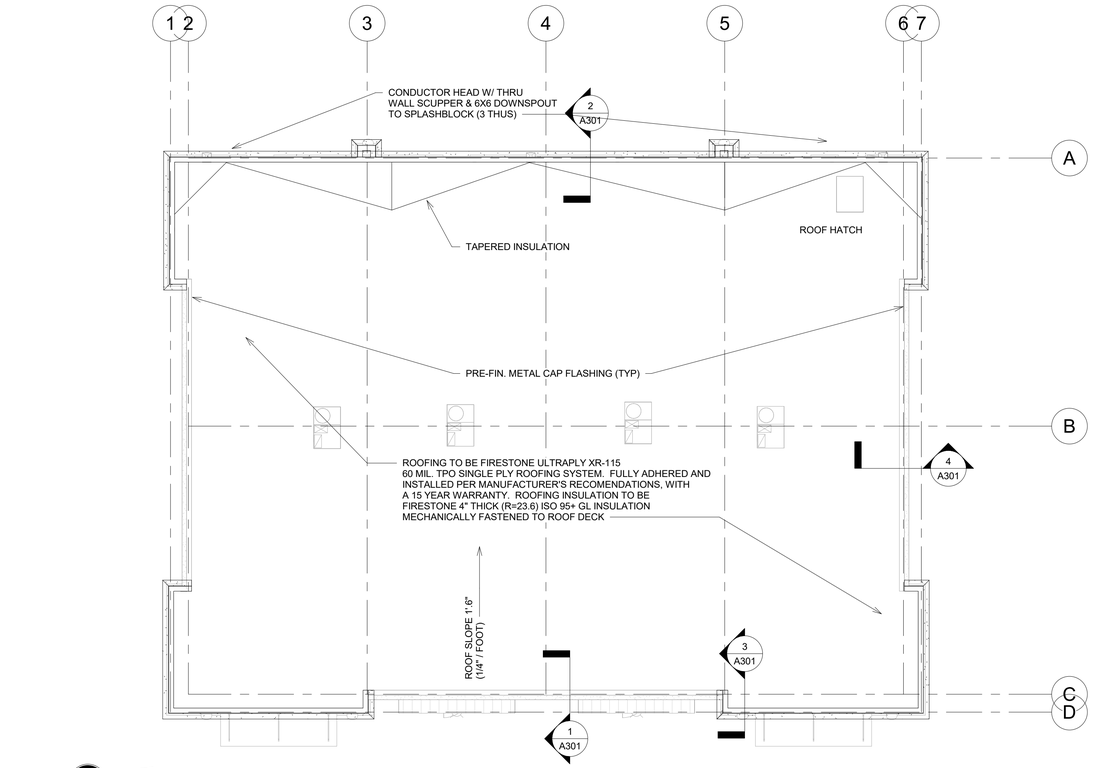


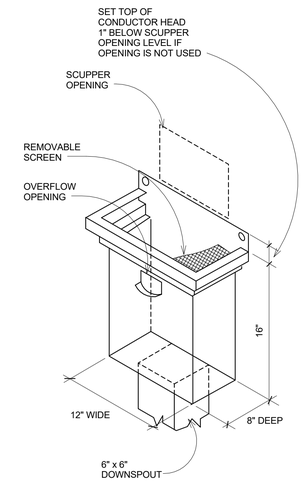
4 Pipe penetration
1" = 1'-0"

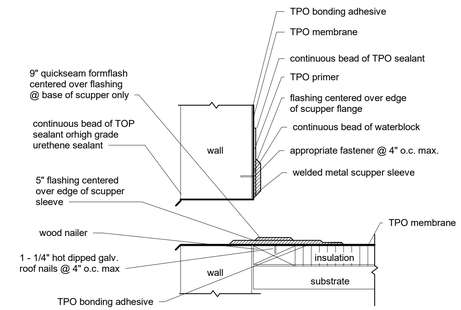


2 Roof hatch w/ guard rail
1" = 1'-0"



1 Roof Plan
1/8" = 1'-0"





NOTE:
CONDUCTOR HEADS AND DOWNSPOUTS SHOULD BE FABRICATED OF 24 GA. PRE-FINISHED METAL

SCUPPER DETAIL AT PARAPET WALL
NOT TO SCALE

3 Scupper detail
1/2" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

No.	Description	Date
	Revision Schedule	

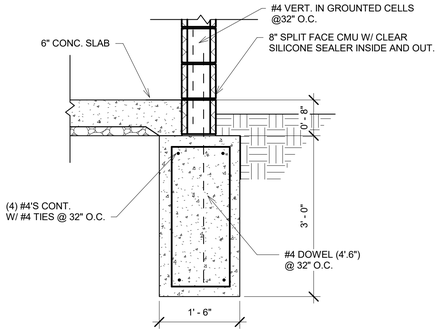
Roof Plan

Project number 2491
Date 03.01.2023

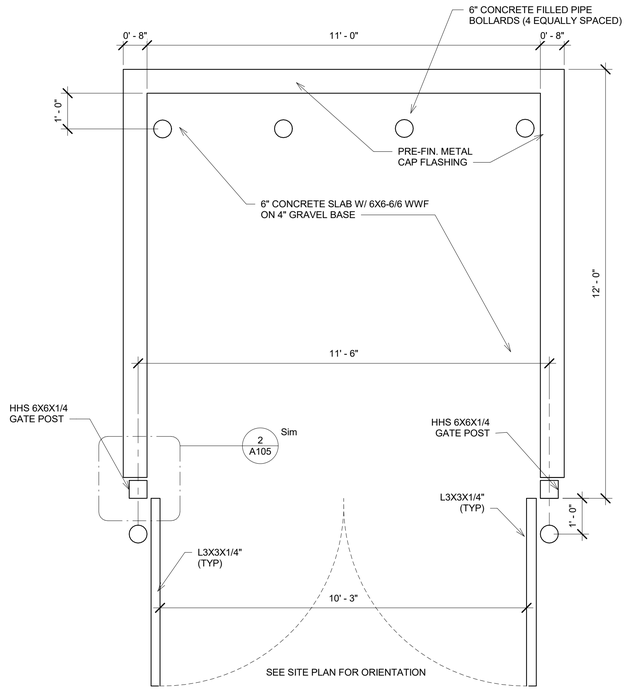
A104

Scale As indicated

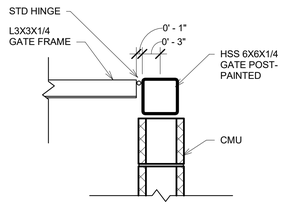
3/24/2023 11:26:15 AM



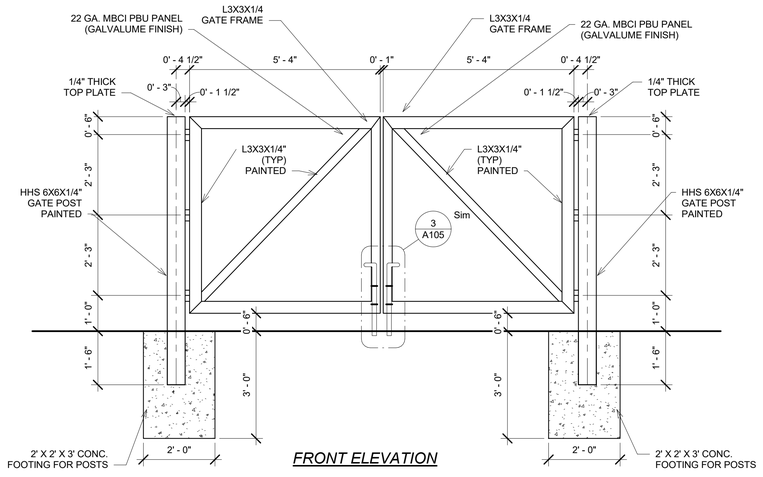
4 Trash Dumpster Detail Wall Section
3/4" = 1'-0"



PLAN VIEW



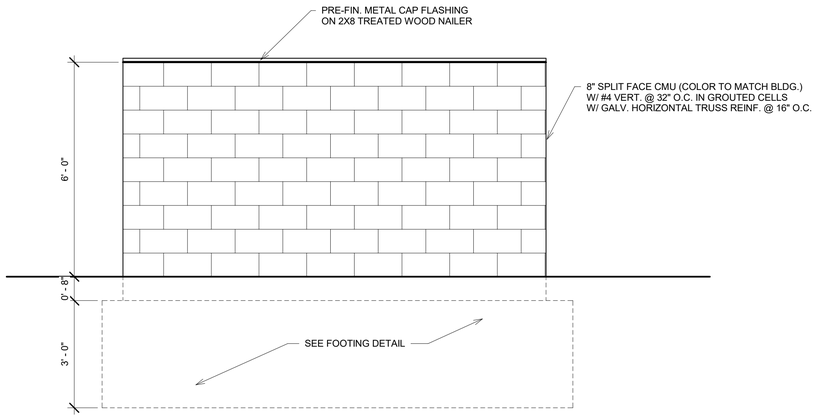
2 Hinge Detail Plan 12x11
1" = 1'-0"



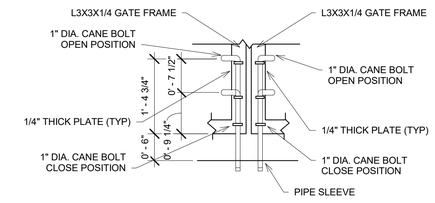
FRONT ELEVATION

ALL STEEL TO BE PAINTED
ALL CMU TO BE RECEIVE CLEAR SILICONE SEALANT @ EXTERIOR

1 Trash Dumpster Detail 11x12
1/2" = 1'-0"



SIDE ELEVATION



3 Trash Dumpster Detail - Hinge Detail
3/4" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
JEFFREY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
3/1/23

No.	Description	Date
	Revision Schedule	

Trash Dumpster Details- 11x12

Project number	2491
Date	03.01.2023

A105

Scale: As indicated

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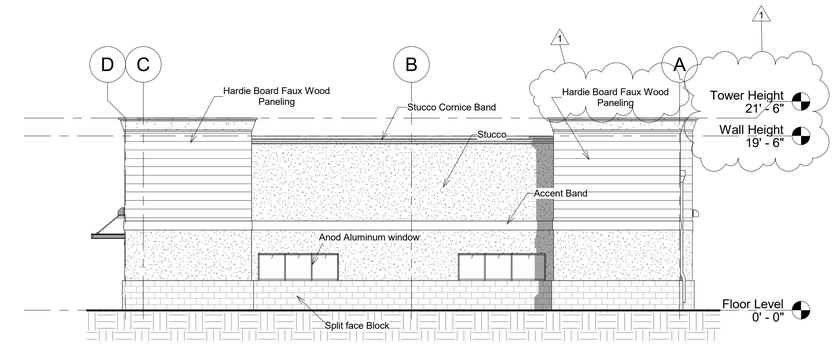
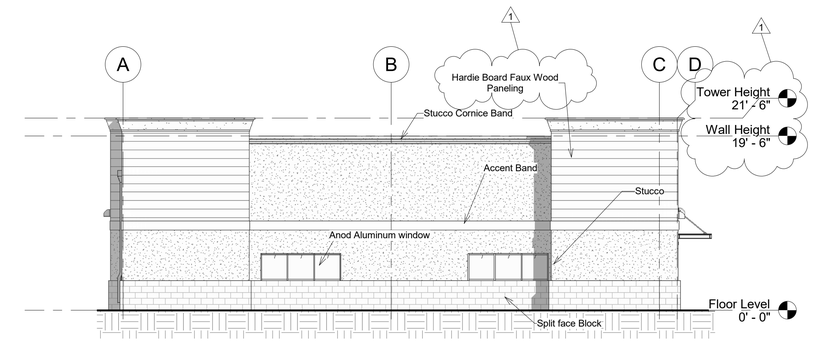
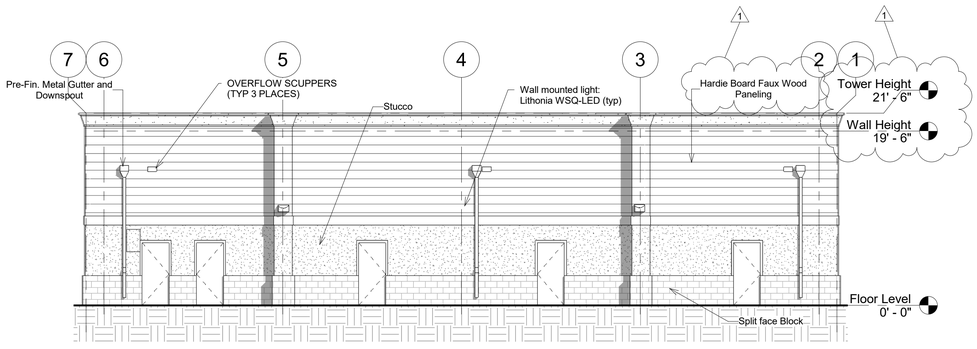


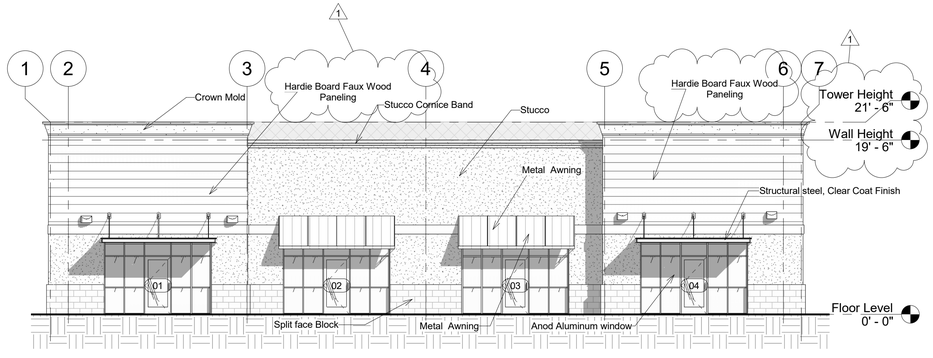
1 East
1/8" = 1'-0"



4 West
1/8" = 1'-0"



2 North
1/8" = 1'-0"



3 South
1/8" = 1'-0"

PROVIDE CLEAR SILICONE SEALER FOR BRICK

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
JEFFREY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
3/23/23

No.	Description	Date
1	City Comments	3.23

Revision Schedule

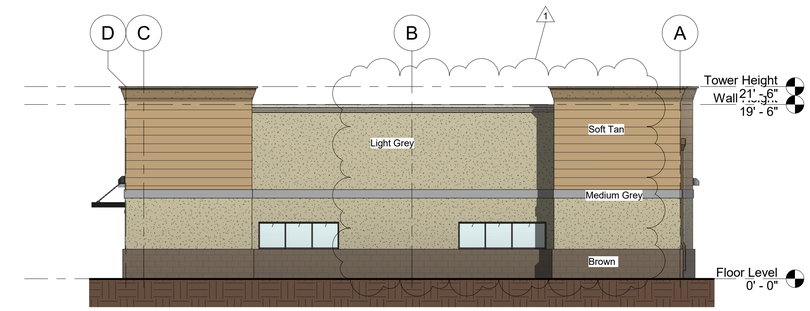
Elevations

Project number	2491
Date	03.01.2023

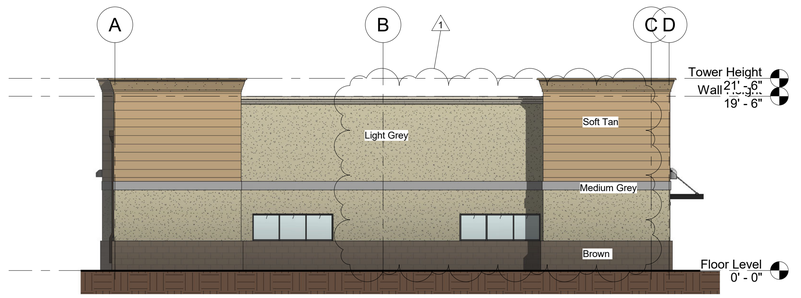
A201

Scale 1/8" = 1'-0"

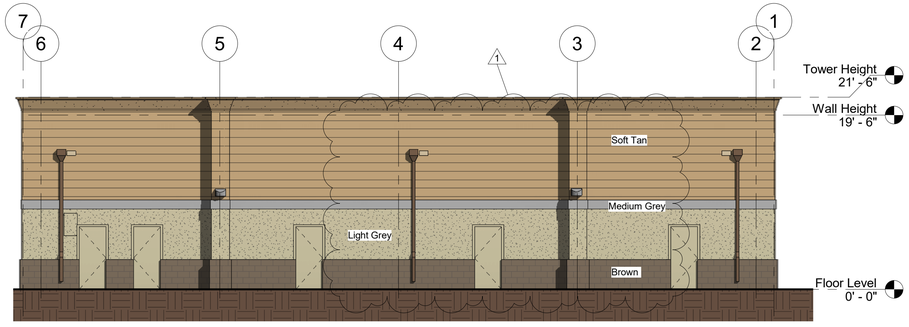
3/24/2023 11:26:16 AM



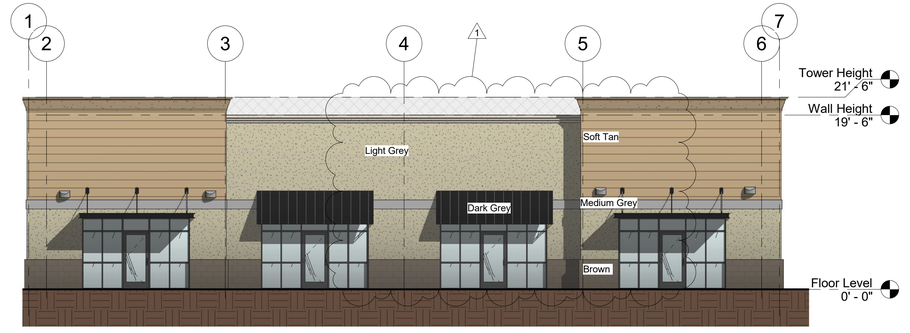
1 East Color
1/8" = 1'-0"



4 West Color
1/8" = 1'-0"



2 North Color
1/8" = 1'-0"



3 South Color
1/8" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFREY SCHROEDER
NUMBER A-4226
3/23/23
REGISTERED ARCHITECT

No.	Description	Date
1	City Comments	3.23

Revision Schedule

Colored Elevations

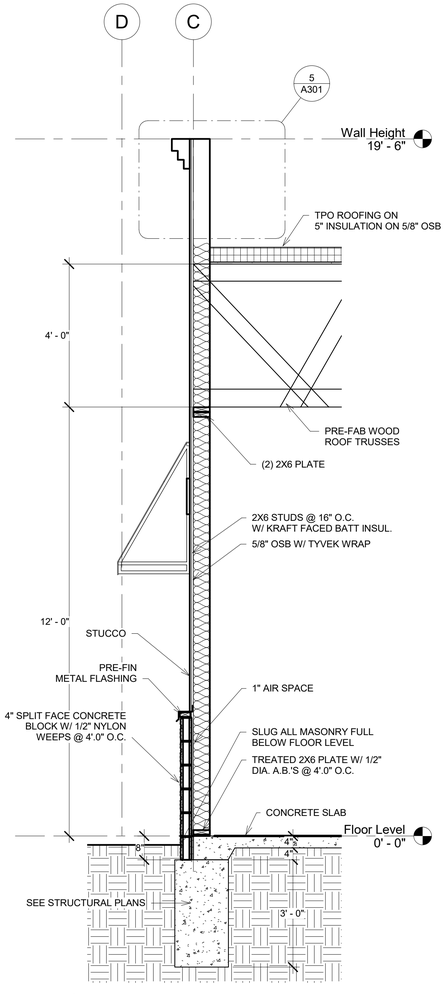
Project number	2491
Date	03.01.2023

A202

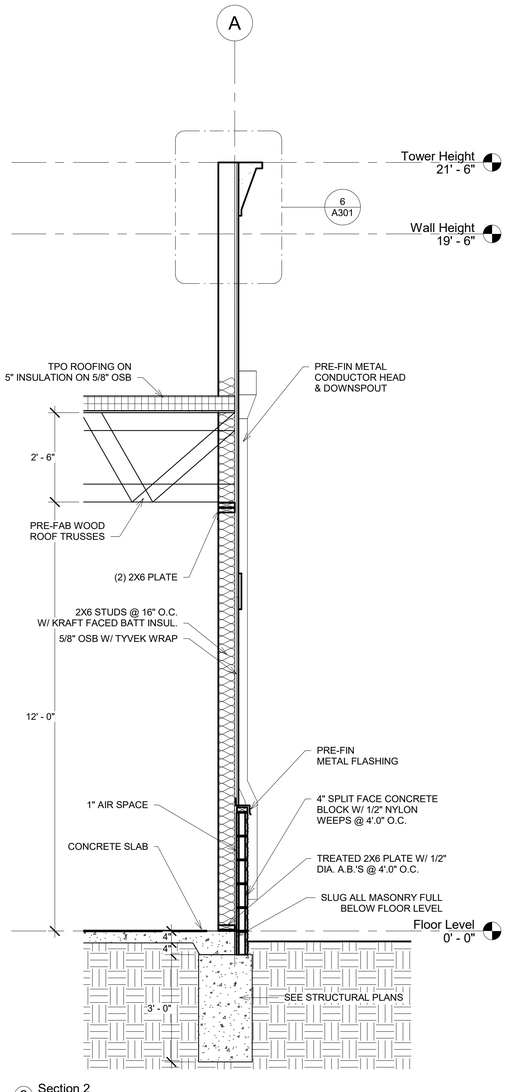
Scale 1/8" = 1'-0"

3/24/2023 11:26:18 AM

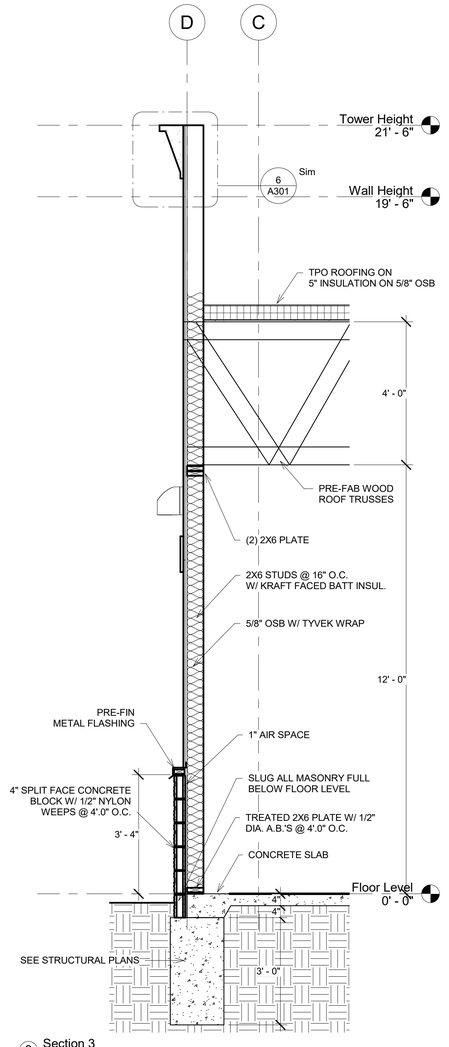
PROVIDE CLEAR SILICONE SEALANT ON ALL SPLIT FACE BLOCK



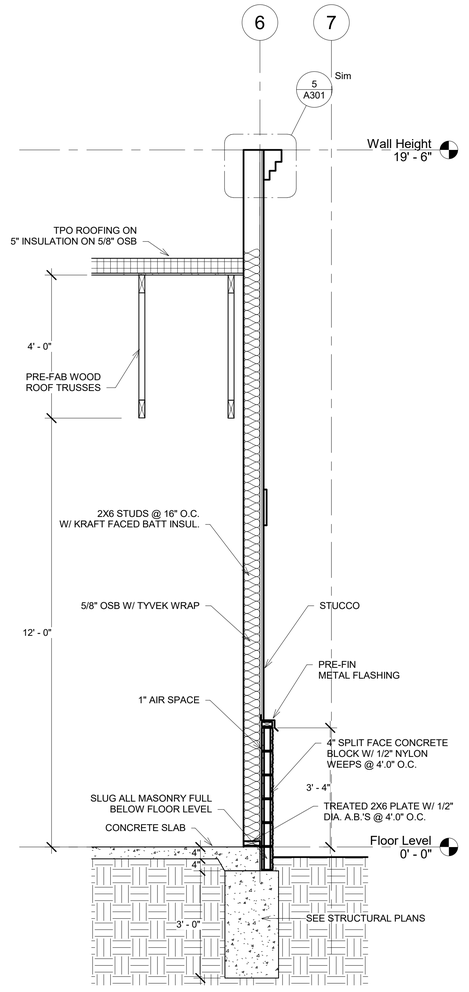
1 Section 1
1/2" = 1'-0"



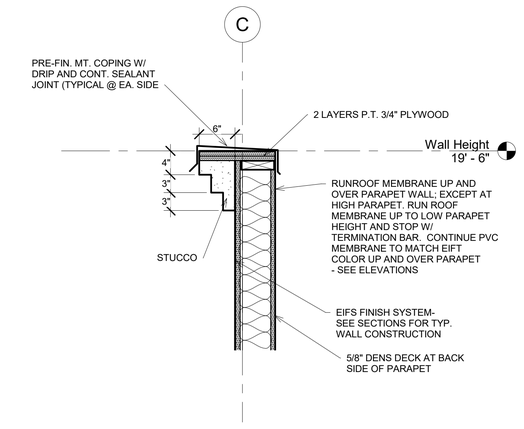
2 Section 2
1/2" = 1'-0"



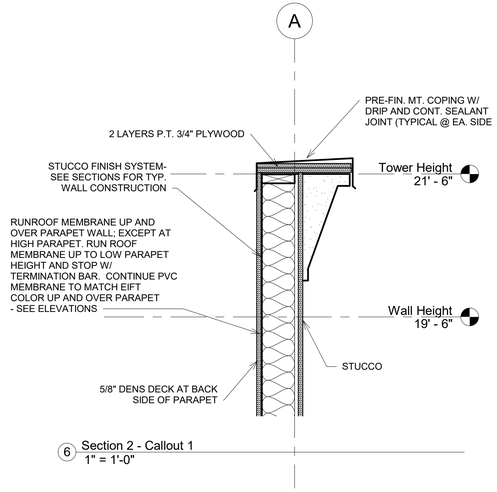
3 Section 3
1/2" = 1'-0"



4 Section 4
1/2" = 1'-0"



5 Section 1 - Callout 1
1" = 1'-0"



6 Section 2 - Callout 1
1" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J. Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
J. JEFFRY SCHROEDER
NUMBER A-4226
REGISTERED ARCHITECT
3/23/23

No.	Description	Date
	Revision Schedule	

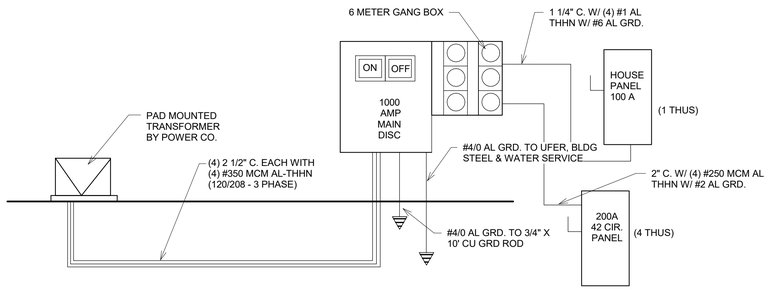
Wall Sections

Project number 2491
Date 03.01.2023

A301

Scale As indicated

3/24/2023 11:26:19 AM

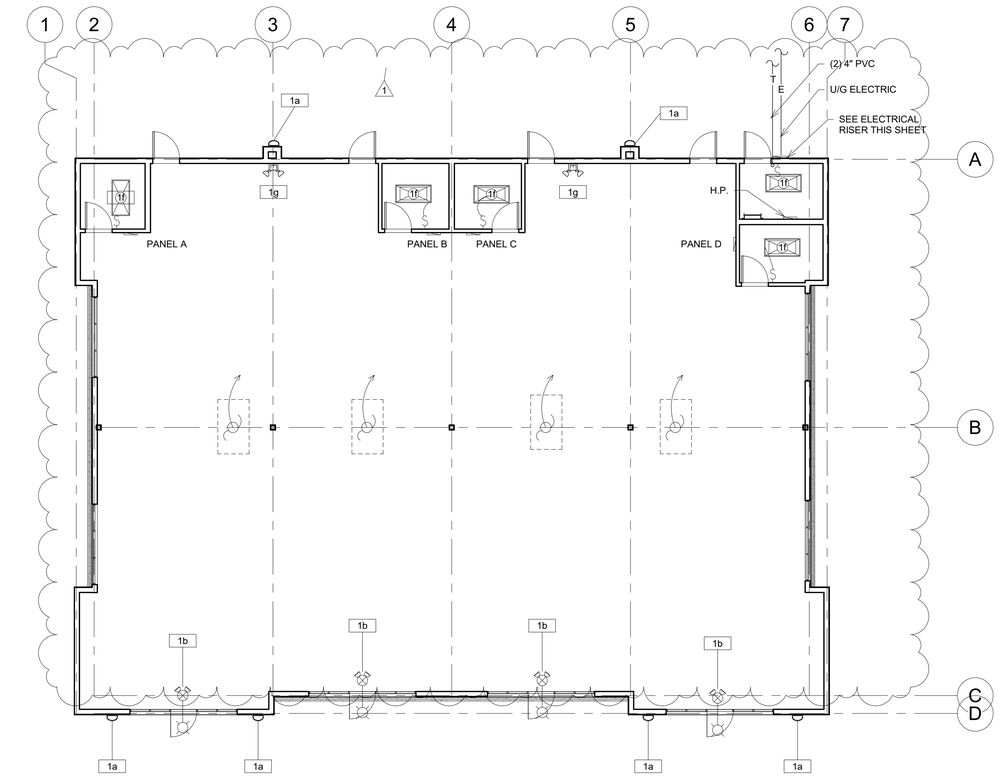


MULTI-TENANT ELECTRIC RISER

MAXIMUM ANITICIPATED LOAD = 1000 AMPS

GROUNDING AND BONDING SHALL BE IN COMPLIANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE, GROUND CONNECTION AT THE MAIN SERVICE EQUIPMENT SHALL BE MADE TO THE METALLIC WATER SERVICE AND TO A COPPER CLAD ROD 3/4" DIA. BY 10' LONG. WHEN AVAILABLE BOND TO A METAL UNDERGROUND WATER PIPE, THE METAL FRAME OF THE BUILDING, A CONCRETE ENCASED ELECTODE, GROUND RING, AND ANY MADE ELECTRODE.

AFC/AIC = 36,115 EST. AVAILABLE FAULT CURRENT. ELECTRICAL GEAR SHALL BE RATED AT 42,000 AFC/AIC



1 Electrical Plan
1/8" = 1'-0"

Lighting Fixture Schedule			
Type Mark	Type	Type Comments	Count
1a	Lithonia Exterior Wall Mounted LED Fixture	WSQ LED 40KP3 MVOLT DDBXD, 40W	6
1b	Exit Light- Exterior	Combo exit and emergency LED light w/ remote exterior head. All with 90 min. battery backup. With remote head	4
1f	Lithonia LED Recessed Troffer	EPANL-2X4-5400L-80CRI-40K-MIN10-ZT-MVOLT, 40 WATT	5
1g	Emergency Light	Two sealed beam lamps, LED w/ battery backup with 90 minute miminum operation on battery, battery charger, battery test button and light. 120 volt. Wall mounted	2

ELECTRICAL NOTES:

ALL ELECTRICAL LIGHT AND POWER WIRE SHALL NOT BE SMALLER THAN #12 AWG. ALL LIGHTING AND POWER WIRING #10 AWG AND SMALLER SHALL BE SOLID. ALL CONDUCTORS SHALL BE COPPER ONLY. NO ALUMINUM IS ALLOWED

ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH THE LATEST NEC TABLES. MINIMUM CONDUIT SIZES SHALL BE ¾". ALL CONDUIT IN AND UNDER FLOOR SLAB SHALL BE SCHEDULE 40 PVC

ALL POWER WIRING IN ALL AREAS SHALL BE IN EMT CONDUIT, BOTH IN WALLS AND THROUGH EXPOSED JOISTS. MC CABLE AND ARMORED CABLE ARE ALSO ALLOWABLE IN AREAS WHERE CONDUITS ARE NOT EXPOSED

ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT, FOR WORK DESIGNATED AS HIS RESPONSIBILITY, ALL WIRE, WIRE WAY, CONDUIT, CONNECTORS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS THOUGH FULLY SHOWN AND SPECIFIED. ALL LABOR, TOOLS, MATERIALS, EQUIPMENT SHALL BE PROVIDED AS NECESSARY TO PROVIDE AND INSTALL A COMPLETE SYSTEM. ALL WORK SHALL BE PER CURRENT CODE. COORDINATE ALL WORK WITH OTHER TRADES

ELECTRICAL CONTRACTOR SHALL CIRCUIT FIXTURES AND SHALL PROVIDE AND INSTALL CIRCUIT DIRECTORY WITH TYPED CIRCUIT DESIGNATION CARD UNDER PLASTIC COVER ON THE INSIDE OF EACH PANEL DOOR. ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL NAMEPLATES ON ALL DISCONNECT SWITCHES AND PANEL BOARDS

ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING, ALL CONTROL WIRING AND ALL STARTERS, DISCONNECTS AND THERMAL OVERLOAD SWITCHES NOT SUPPLIED WITH THE EQUIPMENT

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

STATE OF MISSOURI
JOHN WILLIAM CARL
NUMBER E-14378
REGISTERED PROFESSIONAL ENGINEER
3/23/23

No.	Description	Date
1	City Comments	3.23

Revision Schedule

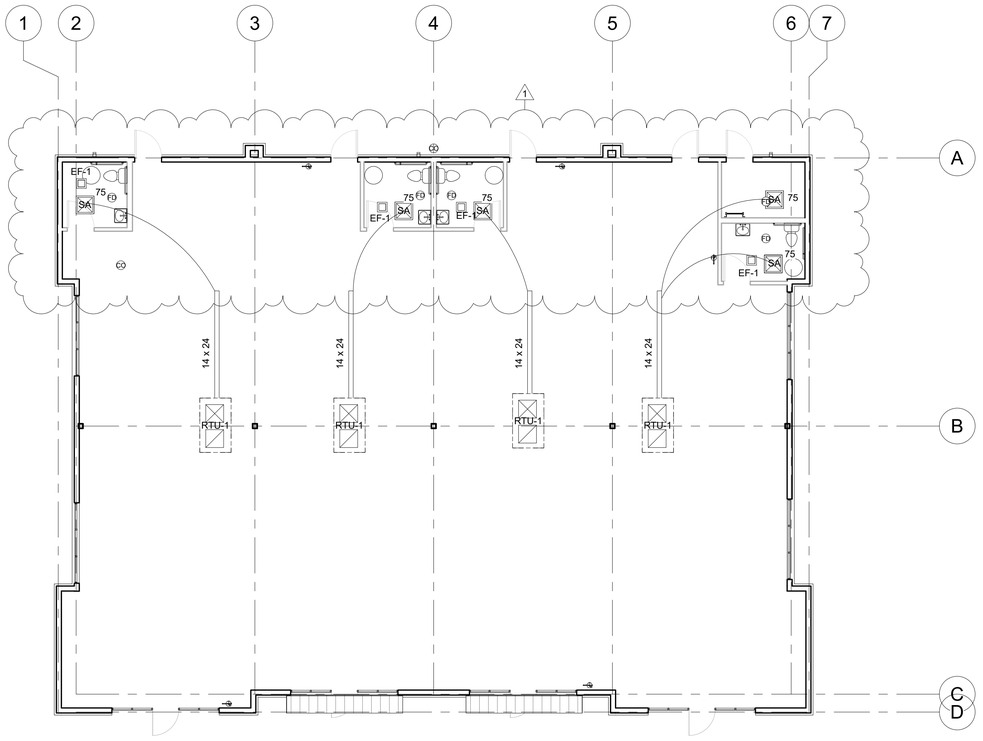
Electrical

Project number 2491
Date 03.01.2023

E101

Scale As indicated

3/24/2023 11:26:20 AM



1 Mechanical Plan
1/8" = 1'-0"

Mechanical Equipment Schedule			
Type Mark	Type	Type Comments	Count
EF-1	75 CFM Exhaust Fan	Broan ceiling mounted exhaust fan rated at 75 CFM. Provide 4" dia. duct through roof with weatherhood and birdscreen. switch with lights.	4
RTU-1	New 5 Ton RTU	Trane 5 Ton RTU. Electric cooling and gas heat 1,950 CFM w/ roof curb, economizer, and programable thermostat. 115,000 BTU. 12.6 IEER.	4
SA	24" x 24"Supply	As Located per plans	5

HVAC NOTES

MAIN DUCTWORK SHALL BE STEEL GALVANIZED SEALED AIR TIGHT.

SHEET METAL GUAGES SHALL BE PER SMACNA AND NO LESS THAN 24 GA. INSULATED DUCTS WITH ½" - 3# INSULATION.
DO NOT LINE TOILET/SHOWER EXHAUST DUCTS.

GRILLES AND DIFFUSERS SHALL BE TITUS, TUTTLE & BAILEY OR EQUAL. SEE ARCHITECTURAL OR ELECTRICAL DRAWINGS FOR CEILING GRID.
ALL SHALL BE 4-WAY.

FLEX BRANCH CONNECTIONS SHALL HAVE INSULATED FLEX DUCT, SPIN COLLARS WITH ADJUSTABLE DAMPER AND 90 DEGREE ELL
AT DIFFUSER TO PREVENT KINKS, IN BOTH SUPPLY AND RETURN.

COORDINATE ALL WORK WITH OTHER TRADES. ALL WORK SHALL COMPLY WITH CURRENT BUILDING CODE LISTED IN THE CODE ANALYSIS.
ENTIRE SYSTEM SHALL BE TESTED AND BALANCED AT COMPLETION OF WORK.

ALL FLUES FROM GAS FIRED EQUIPMENT SHALL BE TYPE B DOUBLE METAL WALL TYPE WITH GALVANIZED EXTERIOR SHELL
AND ALUMINUM INTERIOR LINER AS MANUFACTURED BY METALBESTOS OR EQUAL. ALL FLUES SHALL BE KEPT AT LEAST 1" FROM COMBUSTIBLE MATERIALS.

FLEX DUCT SIZES (MAX. 8' RUN)

500 – 600 CFM 12" DIA. FLEX
400 CFM 10" DIA. FLEX
300 – 200 CFM 8" DIA. FLEX
100 – 150 CFM 6" DIA. FLEX

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

STATE OF MISSOURI
JOHN WILLIAM MARSHALL
NUMBER E-14378
PROFESSIONAL ENGINEER
3/23/23

No.	Description	Date
1	City Comments	3.23

Revision Schedule

Mechanical

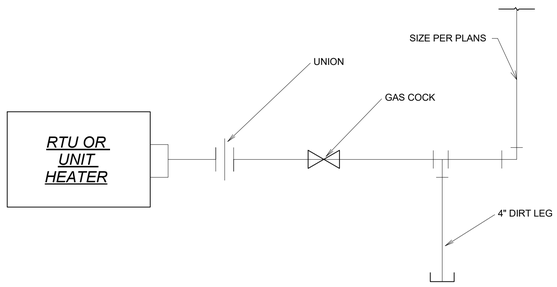
Project number 2491
Date 03.01.2023

M101

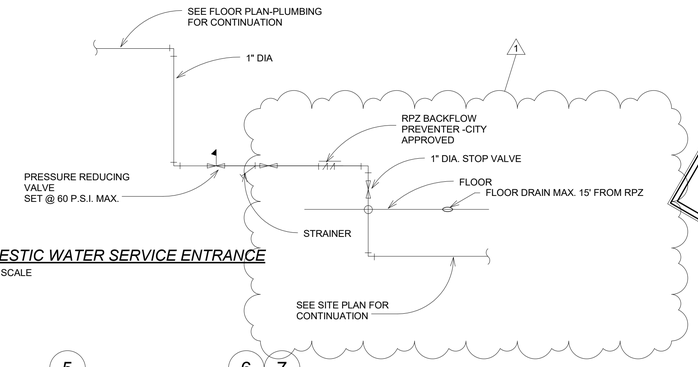
Scale 1/8" = 1'-0"

3/24/2023 11:26:20 AM

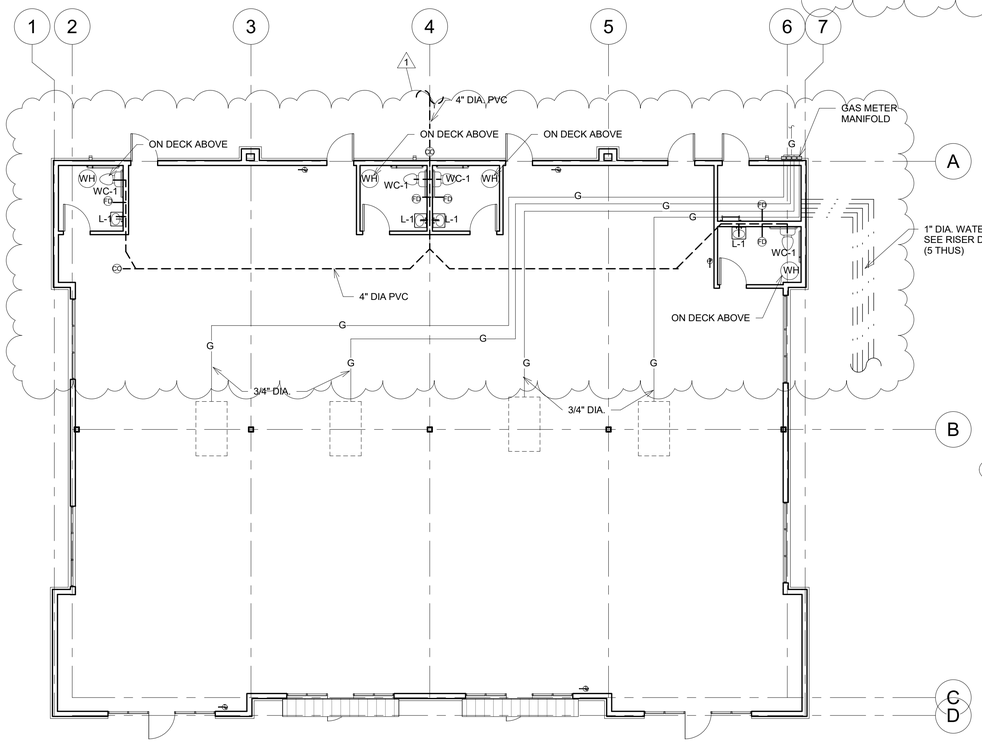
Plumbing Fixture Schedule		
Type Mark	Type	Description
CO	Clean Out	Ancon #CO-200-R Universal floor clean out w/ lacquered all cast iron body. Neoprene secondary "O" ring and adjustable satin nickel bronze combined access cover and plug
FD	Floor Drain	Anco #FD-1000-ER. Extended rim drain w/ lacquered allcast iron body. serrated clamping flange w/ integral double drainage weep holes and adjustable satin nickel brone strainer w/ extended rim. provide "P" trap size as shown on plans.
L-1	Lavatory (handicapped)	Lavatory: Handicap accessible wall mount lavatory with carrier, Toto model LT155#01,vitreous china, white, self-rimming counter top. Toto TL362SD12 ADA compliant faucet, SS flex suply risers with chrome plated stop valves, P-trap with cleanout and escutcheons. Insulated with "Handi-Lav-Guard" model 102, or equal.
WC-1	Handicapped Toilet	Water Closet, (handicapped) American Standard #208.408 "Elongated Cadet Water Saver". Siphon jet flush action, 18" rim height. Provide w/ open front seat less cover, 2'bolt caps, chrome angle valve and supply riser.
WH	Electric Water Heater	6 gallon electric water heater. A.O. Smith or equal with expansion tank and tempering valve



5 Natural gas connection
1/4" = 1'-0"

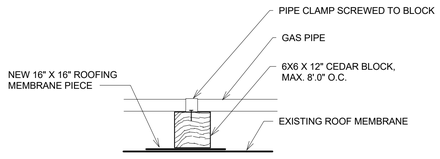


DOMESTIC WATER SERVICE ENTRANCE
NOT TO SCALE



1 Plumbing Plan
1/8" = 1'-0"

6 Plumbing Riser Dia.
1/8" = 1'-0"



4 Gas pipe Roof detail
1" = 1'-0"

FIXTURE PIPING SCHEDULE

FIXTURE	WASTE	VENT	CW	HW
WC	4	2	1/2	0
Lavatory	2	1 1/2	1/2	1/2
Sink	2	1 1/2	1/2	1/2
Urinal	2	1 1/2	3/4	0
EWC	1 1/2	1 1/2	1/2	0
Shower	2	1 1/2	3/4	3/4
FD	2	1 1/2	0	0
Hose Bib	0	0	3/4	0

PLUMBING NOTES:

PIPING DRAWINGS ARE SCHEMATIC ONLY. PLUMBING CONTRACTOR TO DETERMINE EXACT ROUTING AND LOCATIONS OF ALL PIPING ON JOB SITE IN COMPLETE COORDINATION WITH ALL OTHER TRADES INVOLVED. HE SHALL ALSO VERIFY EXACT FLOOR PLAN LAYOUT, FIXTURE LOCATIONS, STRUCTURAL CONDITIONS AND ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS.

PROVIDE ALL FIXTURES SHOWN ON THE DRAWINGS, COMPLETE WITH HOT AND COLD WATER, WASTE AND VENT CONNECTIONS AS REQUIRED. EACH FIXTURE SHALL HAVE SHUTOFF VALVES FOR HOT AND COLD WATER. HOT AND COLD WATER LINES TO HAVE WATER HAMMER ARRESTOR CONFORMING TO ASSE 1010. PIPING SHALL BE INSTALLED PROPERLY TO ELIMINATE CROSS CONTAMINATION OR SIPHONING OF WASTE MATERIAL INTO THE SUPPLY WATER SYSTEM. PIPING SHALL BE PITCHED TO VENT AND/OR DRAIN. VERIFY EXACT LOCATIONS AND REQUIREMENTS BEFORE BEGINNING THE INSTALLATION.

ALL VENTS SHALL BE INCREASED TO A MIN. OF 3" BEFORE PASSING THROUGH THE ROOF.

THOROUGHLY CLEAN ALL ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL FOR SANITARY JOINT.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE FOR FOUR HOURS MINIMUM. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CODE.

PIPING MATERIALS:

DOMESTIC WATER BELOW GRADE: TYPE 'K' SOFT TEMPER COPPER WITH FLARE FITTING CONNECTIONS, EXCEPT NO FITTINGS TO BE USED BELOW FLOOR SLAB. USE LONG RADIUS BENDS ONLY.

DOMESTIC WATER BELOW SLAB: TYPE 'K' SOFT TEMPER COPPER WITH FLARE FITTING CONNECTIONS, EXCEPT NO FITTINGS TO BE USED BELOW FLOOR SLAB. USE LONG RADIUS BENDS ONLY.

DOMESTIC WATER ABOVE SLAB: TYPE 'L' HARD TEMPER COPPER WITH SWEAT SOLDER CONNECTIONS. USE NO-LEAD TYPE SOLDER. PEX MAY BE USED IF ALLOWED BY JURISTICTION.

ALL WATER LINES ABOVE SLAB SHALL BE INSULATED WITH EXPANDED CELL OR MOLDED SECTIONAL FIBEROUS GLASS WITH FACTORY APPLIED UL LISTED VAPOR BARRIER JACKET. FLAME SPREAD FOR INSULATION SHALL BE 25 OR LESS.

SANITARY WASTE AND VENT: CAST IRON NO-HUB CONNECTIONS ABOVE SLAB. CAST IRON WITH SLIP CONNECTIONS BELOW SLAB. SCHEDULE 40 PVC PIPING MAY BE USED IN ALL LOCATIONS WHERE PERMITTED BY LOCAL AUTHORITIES, HOWEVER PVC MAY NOT BE USED IN ABOVE CEILING PLENUM RETURN AREAS.

GAS PIPING TO BE TYPE 'S' SEAMLESS GRADE B SCHEDULE 40 BLACK OR ASTM A53 STEEL PIPE, TYPE 'E' ELECTRIC RESISTANT WELDED. WHERE INSTALLED BELOW GRADE, PIPE MUST BE COATED AND WRAPPED AND HAVE CATHODIC PROTECTION. ALL CAST IRON PIPE THAT IS OVER 3" DIAMETER AND NOT EXPOSED, MUST BE WELDED PIPE

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

STATE OF MISSOURI
JOHN WILLIAM CHRISTMAN
NUMBER E-14378
PROFESSIONAL ENGINEER
3/23/23

No.	Description	Date
1	City Comments	3.23

Revision Schedule

Plumbing

Project number 2491
Date 03.01.2023

P101

Scale As indicated

3/24/2023 11:26:21 AM

GENERAL NOTES

A. GENERAL

1. These notes shall be read in conjunction with the Specifications and the Drawings. In the event of a conflict, notify the Architect for clarification.
2. Before executing anything herein shown, examine actual job conditions.Report any discrepancy, dimensional or otherwise, between architectural and structural Drawings and any other error, omission, or difficulty affecting the work to the Architect and to the Structural Engineer for review.
3. The Owner or his Representative reserves the right to inspect any material, fabrication, or workmanship at any time in field or shop for conformance to the Specifications and Drawings.
4. All details and sections are intended to be typical and shall be construed to apply to any similar situation elsewhere, except where a different detail is shown.

B. DESIGN

1. Codes, specifications and standards (latest editions, U.N.O.)
   a. All design and construction shall conform to the International Building Code (currently adopted edition) as amended and adopted by the City of jurisdiction.
   b. All construction shall comply with the provisions of the following codes,specifications and standards, except where noted to the contrary on drawings and specifications or where more stringent requirements are specified or shown:
      ACI 117 "Standard Specifications for Tolerance for Concrete Construction and Materials"
      ACI 301 "Specifications for Structural Concrete for Buildings"
      ACI 318 "Building Code Requirements for Reinforced Concrete"
      ACI 530 "Building Code Requirements for Masonry Structures"
      AISC "Load and Resistance Factor Design (LRFD) Specification for Structural Steel Buildings"
      SDI "Steel Deck Manual for Floor Decks and Roof Decks"
      AWS D1.1 "Structural Welding Code - Steel "
2. Design Loads:
   a. Roof - Snow (incl. rain on snow)
      - Pf = 20 psf
      - Ce = 1.00
      - I = 1.00
      - Ct = 1.00
   b. Wind
      - Basic Wind Speed = 115 mph
      - I = 1.00
      - Wind Exposure B
      - Internal Pressure Coefficient = 0.3
   d. Floor Live Load - Office 50 psf
      - Entrances (exits), stairs 100 psf
      - Light Storage 125 psf
      - Heavy storage 250 psf
   e. Canopy Roof Design Dead Loads:
      - Roof Panels 30 psf
      - Steel Framing 5 psf
      - Roofing 5 psf
      Total 40 psf
3. Foundations are designed for the following net allowable bearing capacities:
   a. Isolated Footings: 2 ksf
   b. Continuous Footings: 2 ksf
4. Foundations and retaining walls have been designed for an equivalent fluid pressure of 100 pcf.

C. CONCRETE

1. Concrete used in the Work shall have the following minimum 28-day ultimate compressive strengths:
   a. Columns 4000 psi
   b. Retaining walls, slabs on grade, and footings 4000 psi
   c. Framed slabs 4000 psi
2. Air entrain all exterior concrete (admixture: ASTM C 260).
3. Do not use calcium chloride admixtures under any circumstances.
4. Reinforcing bars: ASTM A 615 Specifications, Grade 60, deformed. Bend bars cold.
5. Welded wire fabric (WWF): ASTM A 185.
6. Maintain minimum concrete coverage for reinforcing as indicated, unless noted otherwise. Reference details 17/S1.0 and 18/S1.0 for placement of reinforcement in typical framed slabs.
   a. 3 in. clear where concrete is deposited directly against earth.
   b. 2 in. clear where concrete is exposed to earth or weather but poured against forms for bars larger than #5.
   c. 1-1/2 in. clear where concrete is exposed to earth or weather, but poured against forms for bars #5 or smaller.
   d. 3/4 in. clear for slabs and walls formed above grade not exposed to weather.
   e. 1-1/2 in. clear for beam and columns formed above grade and not exposed to weather.
7. Lap all bars at splices in accordance with ACI 318, unless specifically noted otherwise.
8. Top and bottom bars in continuous grade beams shall run continuous through multiple spans, where possible. Otherwise, top bars shall splice within the middle 1/3 span and bottom bars shall splice over supports.
9. Pour columns, walls, and pilasters to be monolithic.
10. All concrete walls shall be properly braced and held in line until supporting slabs or floors are in place.
11. All bar steel and WWF shall be properly supported and held accurately in place as recommended by the Concrete Reinforcing Steel Institute, except that maximum spacing of any bar or mesh support shall be 3 feet.
    a. Support top slab bars with continuous high chairs.
    b. Support beam bars on heavy beam bolsters.
    c. Support footing and grade beam bottom reinforcing on concrete bricks, concrete blocks, or mounds of poured concrete.
    d. Support WWF in slab-on-grade properly at the mid-depth of the slab.Hooking and pulling up mesh after concrete has started to take its initial set is prohibited.
    e. Supports for reinforcement for exposed-to-view concrete surfaces shall have legs that are in contact with forms plastic protected (CRSI, Class 1) or stainless steel (CRSI, Class 2).
12. Where slabs-on-grade make an abrupt change in direction, such as at doors and corners or ends of walls, provide 2-#4 by 4 feet across the reentrant corner.
13. Provide the following minimum concrete cover for fire rating:

Interior load bearing walls and columns	2 hrs	1 1/2" cover
Concrete beams	2 hrs	1/2" cover
Concrete joists	2 hrs	1 1/2" cover
Floor slab	2 hrs	3/4" cover

D. MASONRY

1. Concrete masonry units (CMU): ASTM C 90, lightweight units (105 pcf or less), with the minimum net area compressive strength of 2200 psi.
2. Mortar: Portland cement and lime, and proportioned in accordance with ASTM C 270 for the following types:
   Type N - for all walls above grade
   Type S - for all walls below grade, in contact with earth
3. f'm = 1500 psi.
4. Provide mortar bed on webs between grouted cells and hollow cells.
5. Grout: ASTM C 476, 3000 psi minimum 28-day compressive strength.
6. Grout all vertical cells and spaces containing reinforcing bars (as detailed) bond beams, and lintels.
7. Vertically reinforce walls as shown on drawings. However, if not indicated on the drawing, reinforce wall as indicated below, at each corner, at ends of 48 inches horizontally throughout the wall, of walls, each side of control joints and openings, and at a maximum spacing unless noted otherwise.
   8" or 6" wall #6
   12" or 10" wall (2) #6
8. Horizontally provide continuous bond beam with 2 #5 minimum for 12" or 10" CMU; 1 #5 minimum for 8" or 6" CMU at floor/roof, near midheight (10'-0 maximum spacing) and top of wall, unless noted otherwise. Provide #5 corner bar for each horizontal bond beam corners.
9. Place reinforcement prior to grouting. Hold vertical reinforcement in position with rebar positioner.
10. Provide horizontal joint reinforcement as indicated on the drawings and specifications, at a minimum provide at 16"o.c.
11. Lap joint reinforcement a minimum of 12 in.
12. In no case shall shores and forms at lintels be removed until it is certain that the masonry has hardened sufficiently to carry its own weight and all other reasonable temporary loads that may be placed on it during construction.
13. Do not wet concrete masonry units.
14. Do not use calcium chloride.
15. Do not use masonry cement.
16. Keep masonry walls shored during construction until the roof deck and floor slabs are in place to provide lateral stability.

E. STEEL

1. Qualifications for Welding Work:
   a. Perform all welding by a certified welder.
   b. Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure".
   c. Provide certifications that welders to be employed in work have satisfactorily passed AWS qualification tests within previous 12 months.
   d. If recertification of welders is required, retesting will be Contractor's responsibility.
2. Erector must examine areas and conditions under which structural steel work is to be installed, and notify Contractor in writing of conditions detrimental to proper and timely completion of Work.Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the Erector.
3. Submit shop drawings prepared under supervision of a registered professional engineer,including complete details and schedules for fabrication and assembly of structural steel members procedures and diagrams.Include details of cuts, connections, camber, holes, and other pertinent data. Indicate welds by standard AWS symbols, and show size,length, and type of each weld. Show size and type of bolt for all bolted connections.
4. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed by others.
5. Paragraph 4.2.1 of the (AISC) "Code of Standard Practice for Steel Buildings and Bridges" is hereby modified by deletion of the following sentence: "This approval constitutes the owner's acceptance of all responsibility for the design adequacy of any detail configuration of connections developed by the fabricator as a part of his preparation of these shop drawings."
6. If required cut edges of backing strips, extension bars, or run-off plates flush with edge of abutting parts.
7. Where framing members and/or connections for steel stairs are not indicated on either structural or architectural drawings, Design the members and/or connections and submit calculations or supporting data to verify their adequacy.A live load of 125 psf shall be used in the design. Fully detail stair connections, including attachments to supporting members.
8. Structural steel: ASTM A 572 - wide flange sections, ASTM A 36 - angles,channels, and plates, ASTM A 501 - pipes, and ASTM A 500, Grade B - tubes.
9. High Strength Bolts (steel-to-steel connections): ASTM A 325N, with twist-off load indicator type heads.
10. Anchor bolts: ASTM A 307, sizes indicated are based on preliminary reactions and spacing.
11. Welded connections: AWS Standards and Specifications using E70xx electrodes, unless noted otherwise.
12. Expansion Bolts: Stud type expansion anchors...(Hilti Kwik Bolt II).
13. Injection Adhesive: Hilti Dowelling Anchor (HY-150); Rawl/Sika Foil-Fast;Ramset/Redhead Epcon Ceramic 6.
14. Drill holes for anchors using a bit incapable of cutting steel. Do not cut existing concrete reinforcing steel. If, while drilling, reinforcing steel is encountered, notify the Structural Engineer for approval of new location. Cleaned and patch the abandoned hole grout.
15. Ends of beams which have copes to the extent that allowable shear or bending stress of steel is exceeded shall have web plates of sufficient size welded to the beam to reduce such stresses.
16. Provide holes required for securing other work to structural steel framing, and for passage of other work through steel framing members, as shown on final shop drawings.
17. Do not flame cut holes or enlarge holes by burning.
18. Set structural frames accurately to lines and elevations indicated.Align and adjust various members forming apart of a complete frame or structure before permanently fastening.Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
19. Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads.Remove temporary members and connections when permanent members are in place and final connections are made. Provide temporary guy line to achieve proper alignment of structure as erection proceeds.
20. Clean bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom surface of base plates.
21. Grout plates are prohibited. Tighten anchor bolts after supported members have been positioned and plumbed. Do not remove wedges or shims. but if protruding, cut off flush with edge of base plate prior to packing with grout.
22. Nonshrink grout: CRD-621 Type A, premixed, nonmetallic, noncorrosive, nonstaining.
23. Provide open-web joists (K-series), longspan joists (LH-series), and joist girders as indicated on the Drawings and in accordance with specifications of SJI.
    a. Weld K-series joists to supporting steel with 1/8 in. fillet welds in. long, each side, u.n.o.
    b. Weld LH-series joists to supporting steel with 1/4 in. fillet welds 2 in. long, each side, u.n.o.
    c. Bolt joists at or nearest a column to supporting steel in conformance with O.S.H.A.with erection bolts.
    d. Provide continuous horizontal bridging for joists (u.n.o.) and bottom chord braces for joist girders as required by SJI,except where the net uplift loading requires additional bridging.
    e. Provide horizontal bridging to resist 10psf uplift for main roof at service building and main building penthouse.
    f. Extend bottom cord to brace beam bottom flange at mid-span of beams in service building.
24. Form deck: 9/16 in.galvanized deck with the following minimum properties:
    Minimum thickness 0.0295
    Moment of Inertia 0.024 in ^4
    Section Modulus 0.070 in ^3
25. Composite floor deck: 1-1/2 in. galvanized deck with the following minimum properties:
    Minimum thickness 0.0358
    Moment of Inertia 0.195 in ^4
    Section Modulus 0.240 in ^3
26. Roof deck: 1-1/2" painted wide rib deck with the following minimum properties: Minimum thickness 0.358
    Moment of Inertia 0.212 in ^4
    Section Modulus 0.234 in ^3
27. Roof deck shall be welded to supports to resist a net uplift of 20 PSF.
28. Provide 2-1/2" x 2-1/2" x 1/4" angles as required to support deck at columns, ends of beams, around openings, etc. Except as noted otherwise.
29. Provide 1,500 # misc. steel for use by Engineer, as needed.

E. EPOXY AND MECHANICAL ANCHORS

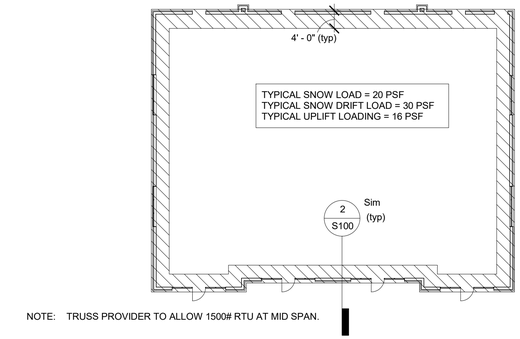
1. For concrete, grouted CMU, and solid masonry use Hilti HIT HY 150 two-part hybrid adhesive. For hollow CMU and masonry use Hilti HIT HY20 two-part hybrid adhesive with screen tubes. Equivalent adhesives may be used with prior written approval by the Structural Engineer.
2. Thoroughly clean holes with nylon brush and pressurized air per manufacturers instructions.
3. Drill holes to the embedment depths indicated on the drawings. If no depths are indicated, use 9 bolt or bar diameters with HY150 and 12 bolt diameters for HY 20.
4. "Wedge" or "Expansion" anchors shall be Hilti Kwik bolt II expansion anchors. Embed anchor 7 bolt diameters unless noted otherwise. Equivalent anchors may be substituted with prior written approval of the Structural Engineer.

F. METAL STUDS

1. Install cold-formed metal studs per drawings and manufacturer's recommendations. See Structural Plan for sizes and gauges.

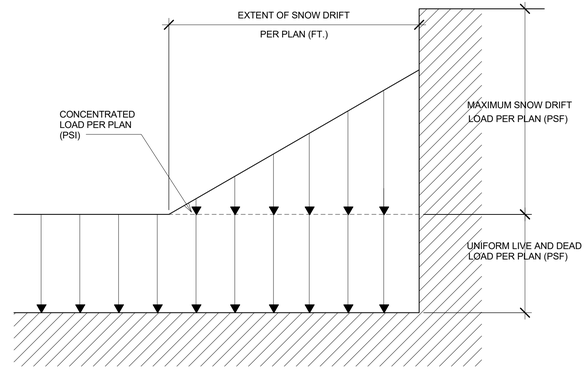
G. CONSTRUCTION

1. See architectural and mechanical requirements for embedded items not shown herein and to verify size and location of all openings.
2. Coordinate the sizes and locations of all miscellaneous metal items required for mechanical and electrical.
3. Requirements for embedded items, sleeves, block outs, duct openings,etc., in the concrete frame shall be submitted (plans and details) to the structural engineer for approval at least two weeks prior to the proposed date of casting concrete. No such items, other than those shown, shall be provided in the structure without the approval of the structural engineer.
4. Provide adequate shoring or bracing during construction to resist forces such as wind and unbalanced loading due to construction.
5. Field verify the location and depth (or height) of all utilities prior to beginning construction in order to provide adequate clearances and to insure noninterruption of service.



NOTE: TRUSS PROVIDER TO ALLOW 1500# RTU AT MID SPAN.

3 Snow Load Plan
1/16" = 1'-0"



2 Snow load
1/2" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

JOSEPH A. TOWNS MO. LIC. E 22017
LORAC DESIGN GROUP
CERT. OF AUTHORITY E-2005032846-D

STATE OF MISSOURI
JOSEPH ALAN TOWNS
NUMBER E-22017
REGISTERED PROFESSIONAL ENGINEER

No.	Description	Date
	Revision Schedule	

Structural Notes

Project number	2491
Date	03.01.2023

S100

Scale As indicated

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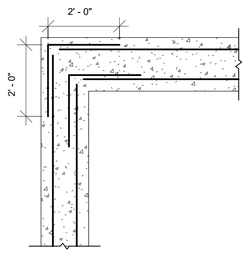
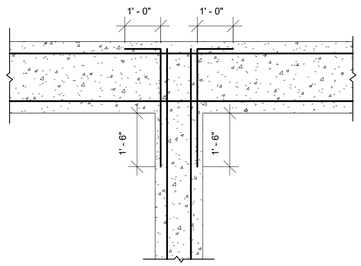
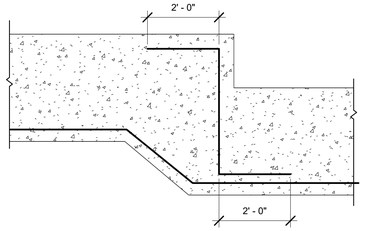


CORNER



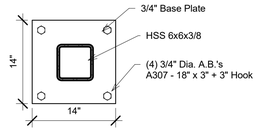
INTERSECTION



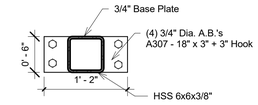
FOOTING STEP

5 Typical Footing Detail
1/2" = 1'-0"

Structural Foundation Schedule		
Type Mark	Type	Type Comments
A	6'x 6' x 2'.0" deep	(7) #6's each way
B	4' x 4' x 3'.0" deep	(5) #5's each way at T &B w/ (1) #6 vert. @ each corner
C	Bearing Footing	2'.0" w x 3'.0" deep w2/ (4) #5's cont. & #3 ties # 36" O.C. w/ #5 dowel 3' x 3' into slab @ 36" O.C.

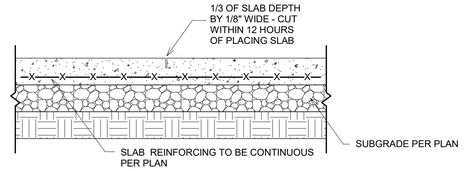


BASE PLATE 'A'

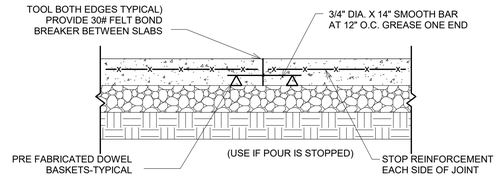


BASE PLATE 'B'

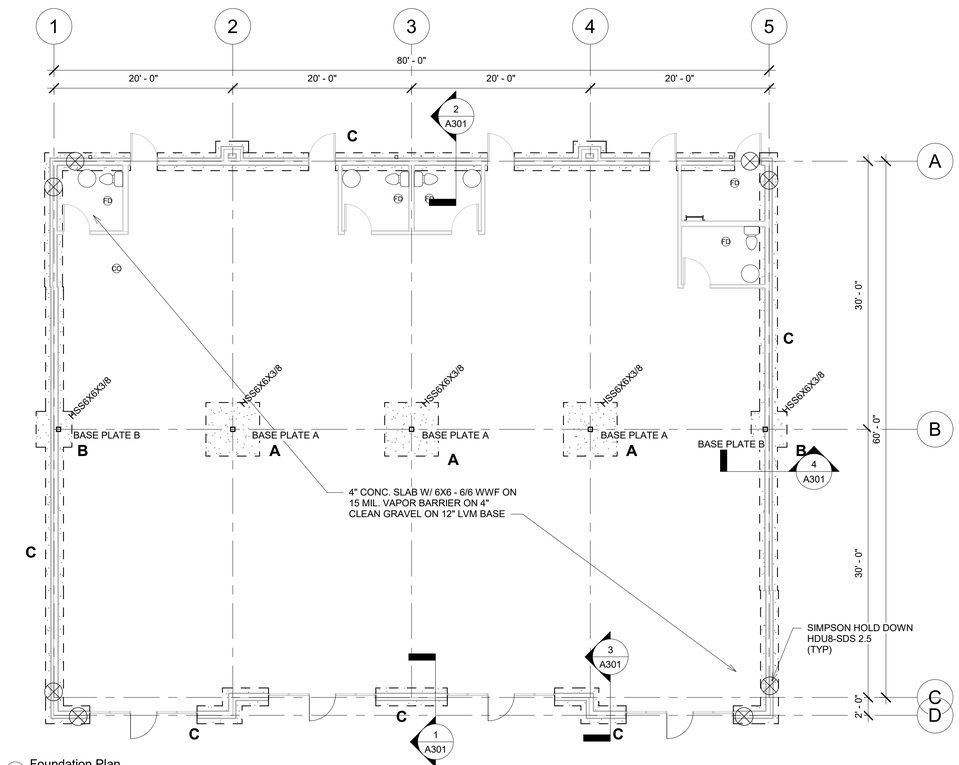
2 Base Plate Details
1" = 1'-0"



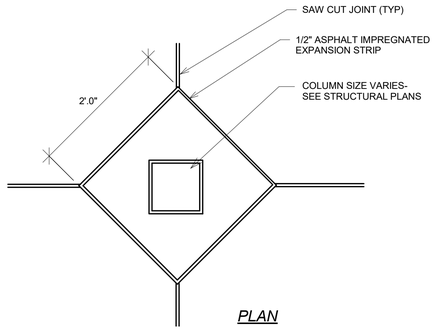
CONTROL JOINT DETAIL



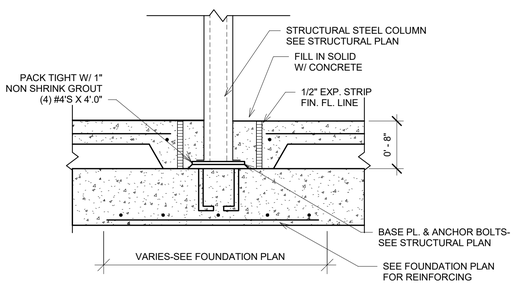
3 Sawcut Floor Slab
3/4" = 1'-0"



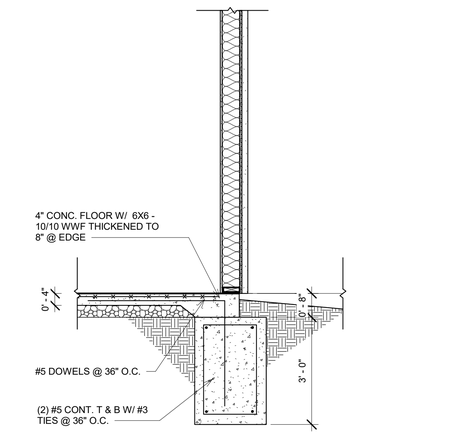
1 Foundation Plan
1/8" = 1'-0"



PLAN



4 Column Detail
1" = 1'-0"



6 Footing type 'C'
1/2" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

JOSEPH A. TOWNS MO. LIC. E 22017
LORAC DESIGN GROUP
CERT. OF AUTHORITY E-2005032846-D

No.	Description	Date
Revision Schedule		

Foundation

Project number 2491
Date 03.01.2023

S101

Scale As indicated

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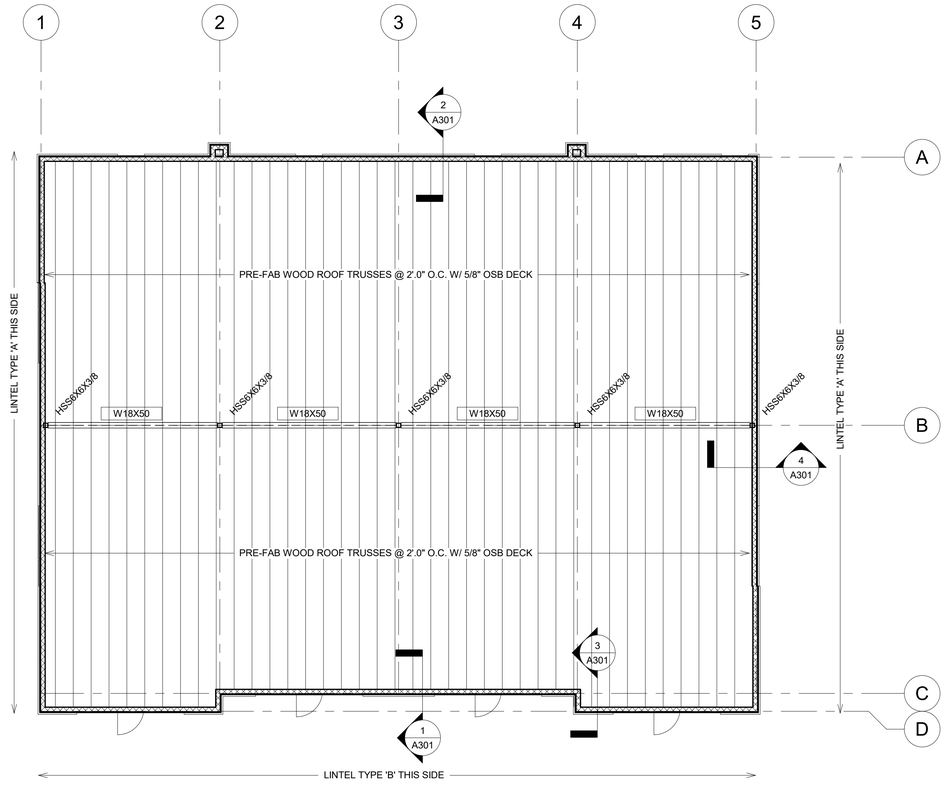
LINTEL SCHEDULE

LINTEL TYPE 'A'	TWO 2X12'S
LINTEL TYPE 'B'	THREE 2X12'S

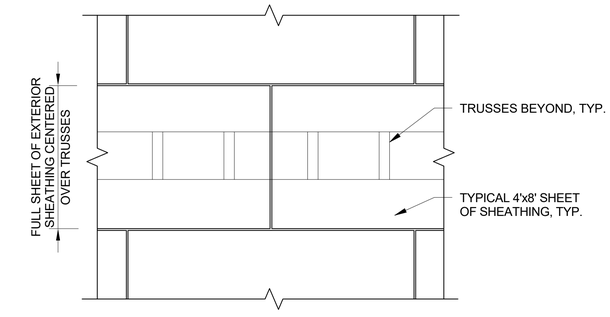
PROVIDE (4) 2X6'S BEARING AT EACH END OF LINTELS

STRUCTURAL NOTES

1. TRUSS MANUFACTURER TO FURNISH ALL HOLD DOWNS AND CLIPS FOR WOOD TRUSSES
2. PROVIDE HEAVY DUTY CLIPS AT ALL PANEL EDGES PERPENDICULAR TO TRUSSES AT 2'-0" O.C. STAGGER END OF PANELS AND GAP ALL PANELS 1/16" AT ALL EDGES
3. PROVIDE SIMPSON H1 HOLD DOWN CLIPS FOR EACH TRUSS
4. ROOF SHEATHING TO BE 5/8" EXTERIOR APA PLYWOOD, NAILED WITH 10d NAILS AT 6" O.C. ALL AROUND PLYWOOD EDGES (BLOCKING AS REQUIRED) AND ALL AROUND ROOF PERIMETER WITH 10d NAILS AT 6" O.C. AT ALL INTERMEDIATE SUPPORTS
5. BRACING DESIGN BY TRUSS MANUFACTURER
6. TRUSS MANUFACTURER TO PROVIDE DESIGN DRAWINGS AND CALCULATIONS AND LAYOUT PLAN, SEALED BY REGISTERED ENGINEER, FOR REVIEW, AND FOR APPROVAL BY THE CITY
7. WALL SHEATHING TO BE 5/8" OSB, NAILED WITH 8d NAILS AT 6" O.C. AT ALL STUDS AND FULL PERIMETER OF EACH PLYWOOD SHEET (BLOCKING AS REQUIRED) AND ALL AROUND PERIMETER OF WALL AND AROUND ALL OPENINGS
8. SEE ARCHITECTURAL SHEETS FOR ALL OPENING HEIGHTS AND WIDTHS
9. ALL DOOR AND WINDOW OPENINGS TO BE SUPPORTED BY MIN. (3) 2X12 LINTEL ABOVE OPENING, BEARING ON (2) STUDS AT EACH SIDE
10. ALL STEEL LINTEL BEAMS TO BE SUPPORTED BY (4) 2X STUDS AT EACH END

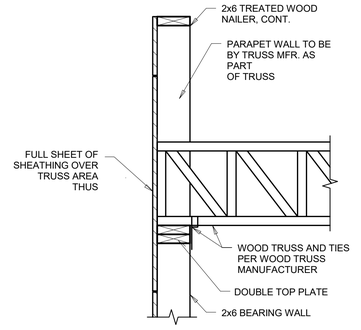


1 Roof Framing Plan
1/8" = 1'-0"



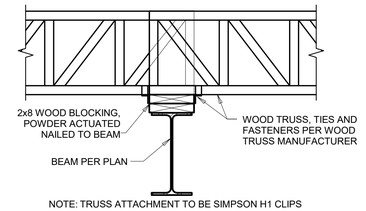
NOTE: ALL EXTERIOR SHEATHING TO HAVE NAILS @ 4" O.C. AROUND EDGE AND 6" O.C. INFIELD.

5 Typical Exterior sheathing wood
1/2" = 1'-0"



NOTE: FOR TYPICAL SHEATHING DETAIL RE: 1/S001

3 typical section at truss bearing wood
1" = 1'-0"



NOTE: TRUSS ATTACHMENT TO BE SIMPSON H1 CLIPS

2 typical section at truss bearing 2 wood
1" = 1'-0"

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NEW BUILDING FOR
SUMMIT ORCHARDS
LEES SUMMIT, MO

J.Jeffry Schroeder Mo. Licence A-4226
Herman Scharhag Co., Arch. Cert. of Authority A-22

STATE OF MISSOURI
JOSEPH ALAN TOWNS
NUMBER E-22017
REGISTERED PROFESSIONAL ENGINEER

No.	Description	Date
	Revision Schedule	

Framing

Project number	2491
Date	03.01.2023

S102

Scale: As indicated

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