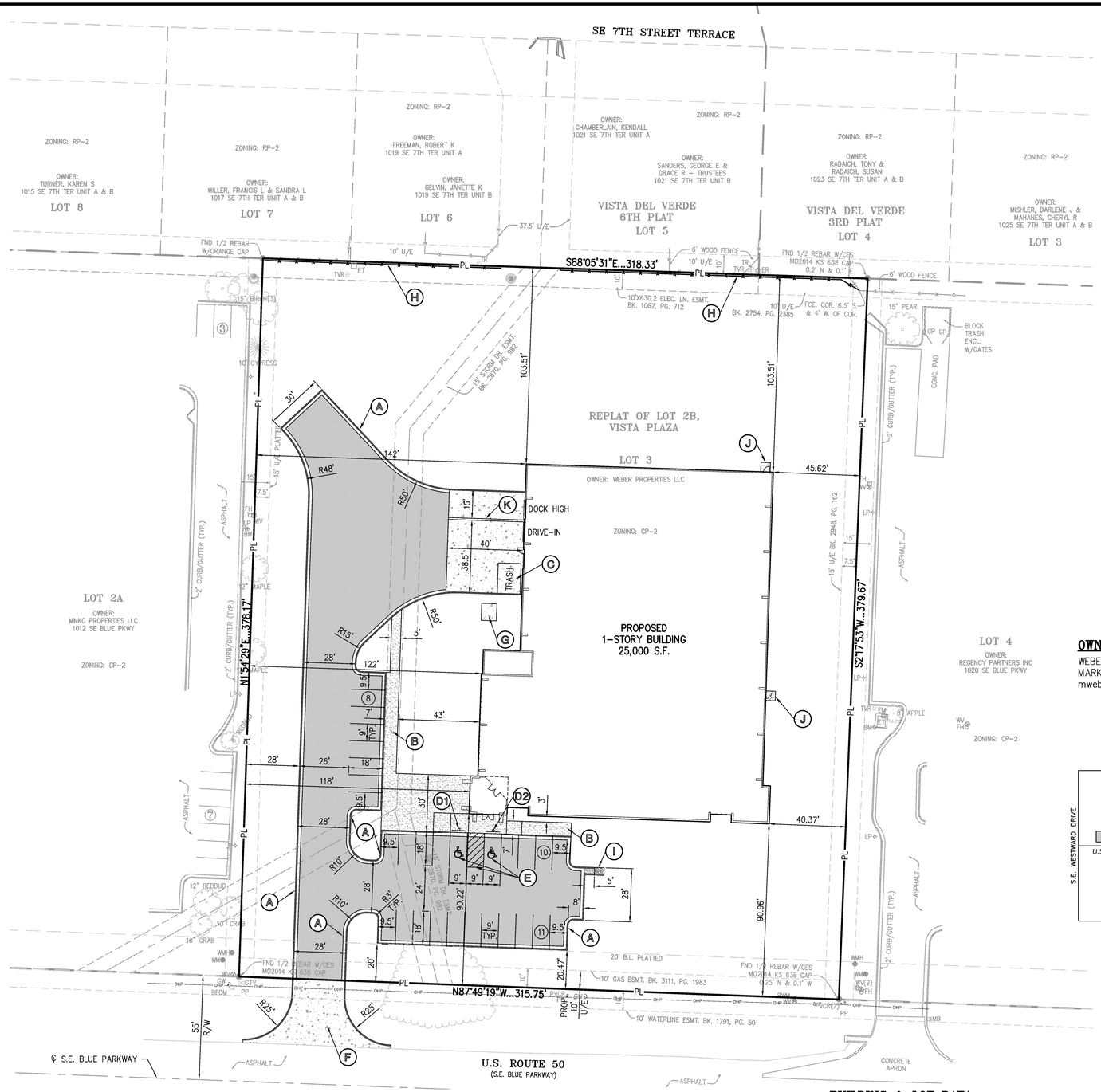

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SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Lee's Summit Technical Specifications and Municipal Code.
   C) All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual shall prevail.

2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.

4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.

5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.

6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.

7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.

8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.

9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.

10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.

11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet kansas city materials metro board (kcmmb) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.

2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.

2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.

3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.

5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

LEGAL DESCRIPTION:

LOT 3, REPLAT OF LOT 2B, VISTA PLAZA, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.

AREA = ±2.7579 ACRES / ±120,134 SQ. FT.

SITE KEY NOTES:

(A) CONSTRUCT 2' TYPE CG-1 CURB & GUTTER (TYPICAL, RE: APWA STANDARD DETAIL C-1).

(B) CONSTRUCT CONCRETE SIDEWALK (TYPICAL, RE: APWA STANDARD DETAIL SW-1).

(C) INSTALL TRASH ENCLOSURE (RE: ARCH).

(D1) INSTALL VAN ACCESSIBLE PARKING SIGN (1).

(D2) INSTALL ACCESSIBLE PARKING SIGN (1).

(E) CONSTRUCT ACCESSIBLE PARKING SPACE. INSTALL ACCESSIBLE PAVEMENT MARKINGS PER ADA SPECIFICATIONS.

(F) CONSTRUCT TYPE III CONCRETE COMMERCIAL ENTRANCE 8" KCMMB 4K CONCRETE (RE: APWA STANDARD DETAILS D-1 & D-2).

(G) CONSTRUCT CONCRETE TRANSFORMER PAD, COORDINATE WITH LOCAL UTILITY CO.

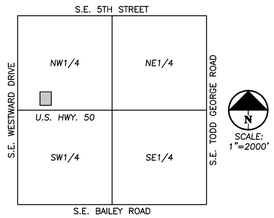
(H) INSTALL 6' CEDAR PRIVACY FENCE (RE: LANDSCAPE & ARCH).

(I) CONSTRUCT 4' WIDE CONCRETE FLUME W/ 6 S.Y. RIPRAP (D50=0.50 FT).

(J) CONSTRUCT 5'x5' CONCRETE SIDEWALK STOOP.

(K) CONCRETE DOCK WALL WITH 42" HANDRAIL (RE: STRUCTURAL PLANS).

OWNER/DEVELOPER:
WEBER CARPET
MARK WEBER
mweber@weberflooring.com



VICINITY MAP
SEC. 9–47–31

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

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

LEGEND

- PROPERTY LINE
- LOT LINE
- RIGHT-OF-WAY
- PROPOSED 2' CURB & GUTTER
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FENCE
- (11) PROPOSED PARKING SPACES

BUILDING & LOT DATA

Site Area	120,134 S.F./2.76 Ac.
Site Zoning	CP-2
Proposed Building No. of Stories	1 Story
Total Building S.F.	25,000 S.F.
Floor Area Ratio (FAR)	0.21
Existing Impervious Area	0.00 Ac.
Proposed Impervious Area	1.22 Ac. (44%)

PARKING SUMMARY

Parking Required:	
2 Spaces per 10,000 S.F.	20 Spaces
1 Spaces per 15,000 S.F.	15 Spaces
Total Parking Required	35 Spaces
Handicap Parking Required (26–50):	2 Spaces
Parking Provided:	
Standard Parking Provided	27 Spaces
Handicap Accessible Parking Spaces Provided	2 Spaces
Total Parking Provided	29 Spaces

SCALE: 1"=30'
0' 30' 60'

PHELPS ENGINEERING, INC.
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PLANNING
ENGINEERING
IMPLEMENTATION

SITE PLAN
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 03-16-17 DRAWN: SNH
CHECKED: APPROVED:
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82 LAND SURVEYING - LS-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128 ENGINEERING-2007005308

SHEET
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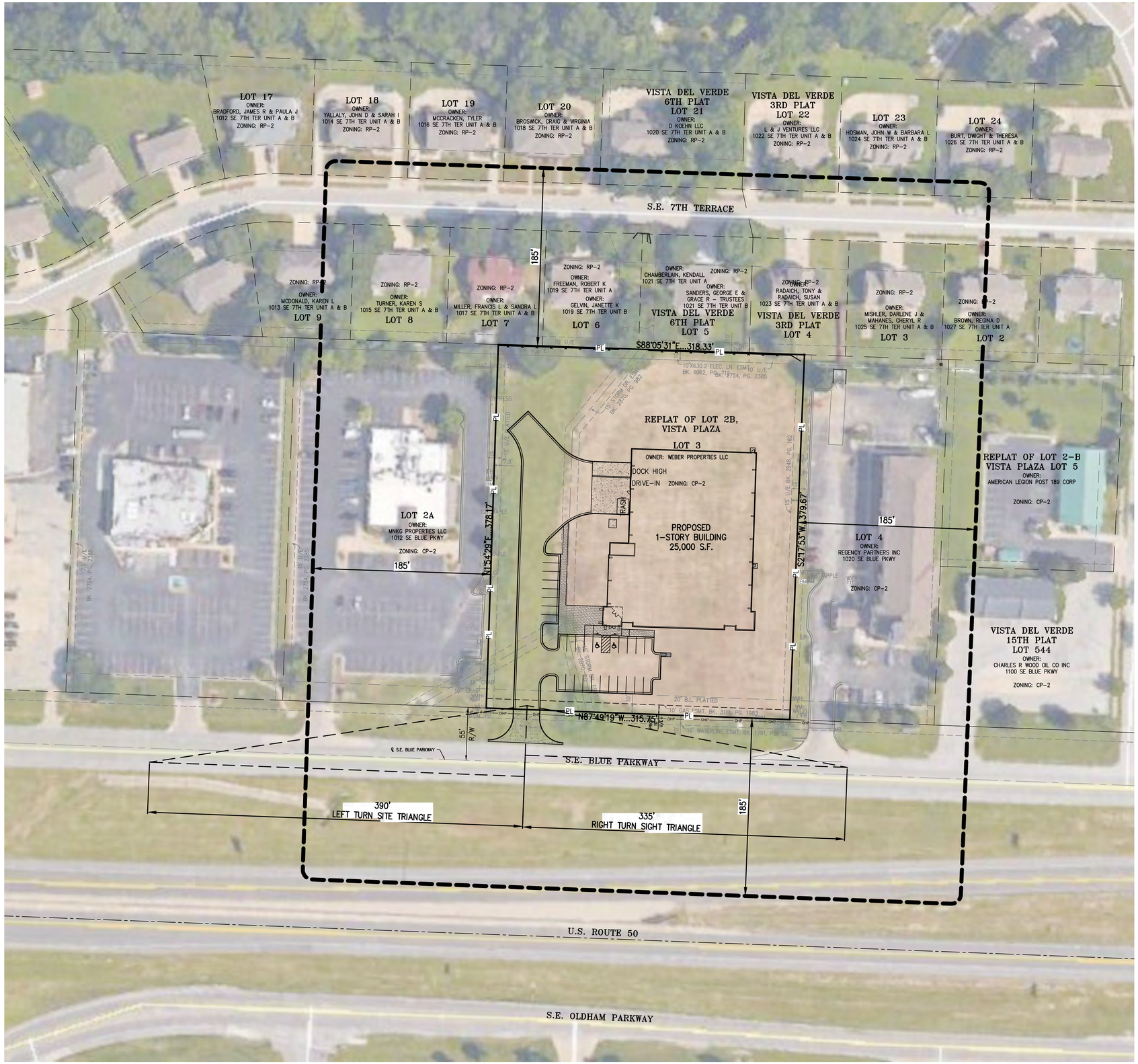
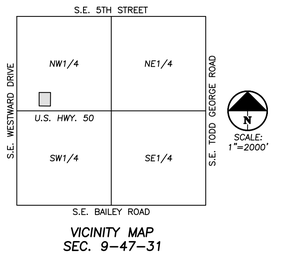


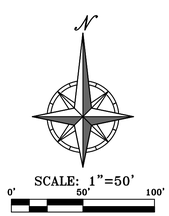
OWNER/DEVELOPER:
WEBER CARPET
MARK WEBER
mweber@weberflooring.com



VICINITY MAP
SEC. 9-47-31

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- PROPOSED 2' CURB & GUTTER
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FENCE



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PLANNING
ENGINEERING
IMPLEMENTATION

SITE PLAN WITH AERIAL

WEBER CARPET

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 03-16-17 | DRAWN: SNH
CHECKED: | APPROVED:

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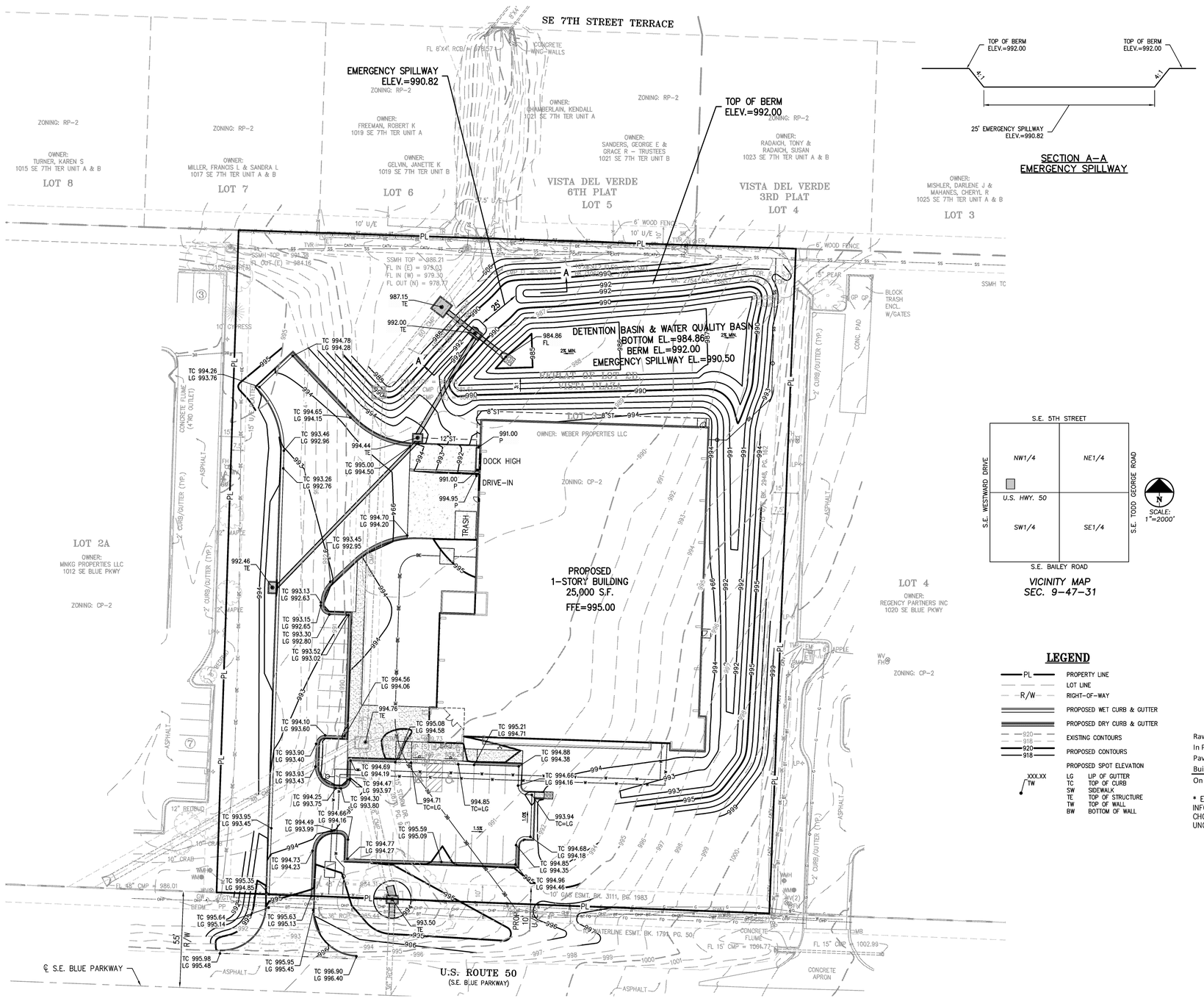
ENGINEERING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007000308

SHEET
C1A



SECTION A-A
EMERGENCY SPILLWAY

VICINITY MAP
SEC. 9-47-31

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- 920 / 918 — EXISTING CONTOURS
- 920 / 918 — PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
- XXX.XX / TW

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
TE	TOP OF STRUCTURE
TW	TOP OF WALL
BW	BOTTOM OF WALL

SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.
2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
8. EARTHWORK:
   - A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.
   - B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
   - C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.
   - D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.
   - E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.
   - F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

Earthwork Summary
Webber Carpet
2/28/2017

Raw Excavation	2,285 Cu. Yds.	
In Place Compaction (+15%)	-10,619 Cu. Yds.	
Pavement Adjustment	665 Cu. Yds.	(assume 10" of additional excavation)
Building Adjustment	1,852 Cu. Yds.	(assume 24" of additional excavation)
On Site Net	-5,817 Cu. Yds.	

* EARTHWORK COMPUTATIONS BY PHELPS ENGINEERING, INC. ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTORS BY THEIR CHOSEN METHOD PRIOR TO PLACING BID. ALL EARTHWORK SHALL BE CONSIDERED UNCLASSIFIED. 15% WAS ADDED INTO RAW FILL QUANTITY TO ACCOUNT FOR SHRINKAGE.

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.

Know what's below. Call before you dig.

UTILITY NOTES:
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BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

1. "+" CUT ON SOUTHWEST CORNER OF A CONCRETE ELECTRICAL PAD ON THE MID OF THE EAST LINE OF THE SURVEYED PROPERTY.
   ELEVATION = 1002.27
2. "+" CUT ON TOP EAST SIDE OF A LIGHT POLE BASE ON THE MID OF THE WEST LINE OF THE SURVEYED PROPERTY.
   ELEVATION = 996.80

SCALE: 1"=30'
0' 30' 60'

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Olathe, Kansas 66061
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PLANNING
ENGINEERING
IMPLEMENTATION

GRADING PLAN
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 05-16-17 DRAWN: SNH
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MISSOURI SURVEYING-2002001128
MISSOURI ENGINEERING-2007000308

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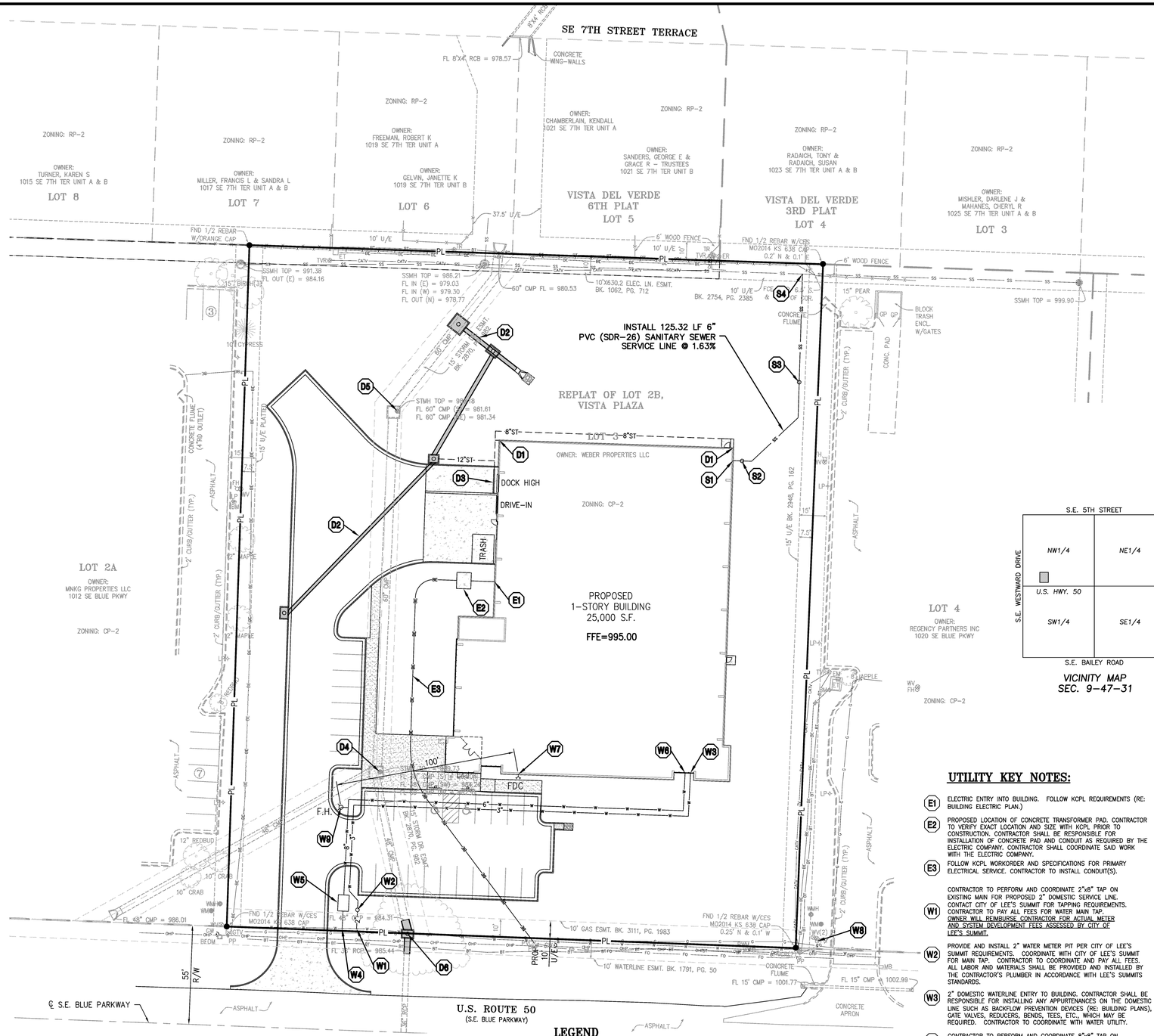

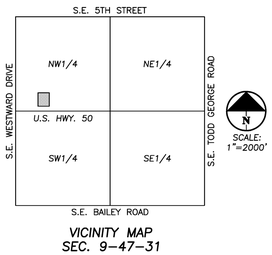

VICINITY MAP
SEC. 9-47-31

UTILITY NOTES:

1. *The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.*
2. *The construction of storm sewers on this project shall conform to the requirements of the City of Lee's Summit, Missouri Technical Specifications and Design Criteria.*
3. *The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.*
4. *It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.*
5. *Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.*
6. *The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City of Lee's Summit, Missouri.*
7. *The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. The contractor shall refer to the architectural plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirements of the City of Lee's Summit, Missouri and the Jackson County Unified Wastewater District.*
8. *The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.*
9. *By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.*
10. *The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.*
11. *All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.*
12. *Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.*
13. *Water lines shall be as follows (unless otherwise shown on plans):*

– Pipe sizes less than 3-inches that are installed below grade and outside building shall comply with the following:

1. Seamless Copper Tubing: Type "K" soft copper, ASTM B88.
2. Fittings: Wrought copper (95_5 Tin Antimony solder joint), ASME B 16.22.

– Gray Cast Iron Water Pipe or Ductile Iron Water Pipe may be used for Pipe sizes 3-inches Through 48-inches that are installed below grade and outside building shall comply with the following:

1. Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
b. Elastomeric gaskets and lubricant: ASTM F477.
c. Cement Mortar Lining, AWWA C104
2. Ductile Iron Water Pipe: AWWA C151, thickness class 50.
a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
b. Elastomeric gaskets and lubricant: ASTM F477.
c. Cement Mortar Lining, AWWA C104

– Polyvinyl Chloride (PVC) Water Pipe may be used for Pipe sizes 4-inches Through 12-inches that are installed below grade and outside building shall comply with the following:

1 Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
a. Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes.
b. Pipe joints: Integrally molded bell ends, ASTM D3139.
c. Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering imprinted with "Water Service" in large letters.

15. *Minimum trench width shall be 2 feet.*
16. *Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.*
17. *All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.*
18. *In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).*
19. *All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.*
20. *All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.*
21. *Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.*
22. *When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.*

UTILITY KEY NOTES:

- **E1** ELECTRIC ENTRY INTO BUILDING. FOLLOW KCPL REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)
- **E2** PROPOSED LOCATION OF CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH KCPL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- **E3** FOLLOW KCPL WORKORDER AND SPECIFICATIONS FOR PRIMARY ELECTRICAL SERVICE. CONTRACTOR TO INSTALL CONDUIT(S).
- **W1** CONTRACTOR TO PERFORM AND COORDINATE 2"x6" TAP ON EXISTING MAIN FOR PROPOSED 2" DOMESTIC SERVICE LINE. CONTACT CITY OF LEE'S SUMMIT FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED BY CITY OF LEE'S SUMMIT.
- **W2** PROVIDE AND INSTALL 2" WATER METER PIT PER CITY OF LEE'S SUMMIT REQUIREMENTS. COORDINATE WITH CITY OF LEE'S SUMMIT FOR MAIN TAP. CONTRACTOR TO COORDINATE AND PAY ALL FEES. ALL LABOR AND MATERIALS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR'S PLUMBER IN ACCORDANCE WITH LEE'S SUMMITS STANDARDS.
- **W3** 2" DOMESTIC WATERLINE ENTRY TO BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.
- **W4** CONTRACTOR TO PERFORM AND COORDINATE 8"x8" TAP ON EXISTING MAIN FOR PROPOSED 8" FIRE LINE. CONTACT CITY OF LEE'S SUMMIT FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED BY CITY OF LEE'S SUMMIT.
- **W5** BACKFLOW PREVENTION: BACKFLOW PIT CONTAINING BACKFLOW PREVENTION DEVICE (DOUBLE CHECK VALVE (DCV)) FOR 8" FIRE LINE.
- **W6** 6" SPRINKLER ENTRY TO BUILDING. CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE SUCH AS, BUT NOT LIMITED TO GATE VALVES, REDUCES, BENDS, TEES, ETC. (RE: BUILDING PLANS FOR BUILDING), WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.
- **W7** FIRE DEPARTMENT CONNECTION (RE: MEP, MAXIMUM 100' FROM PROPOSED PUBLIC FIRE HYDRANT).
- **W8** EXISTING PUBLIC FIRE HYDRANT (TO REMAIN IN SERVICE).
- **W9** INSTALL PRIVATE FIRE HYDRANT ASSEMBLY. INSTALL 6" C900 PVC FROM 8" WATER MAIN TO HYDRANT (1 LOCATION).
- **S1** STA. 1+25.32, 6" PVC (SDR-26) SANITARY SEWER SERVICE (CONNECT TO BLDG. PLUMBING USING MISSION FLEX-SEAL ARC OR FERNCO STRONGBACK RC COUPLING. FL=989.00
- **S2** STA. 1+20.32 INSTALL 6" SANITARY SEWER CLEANOUT FL=988.92
- **S3** STA. 0+60.00 INSTALL 6" SANITARY SEWER CLEANOUT FL=987.94
- **S4** STA. 0+.00, CONNECT TO EX. SANITARY MAIN WITH WYE CONNECTION. EXISTING SANITARY MAIN SIZE AND FLOWLINE NOT FIELD VERIFIED. CONTRACTOR TO EXCAVATE AND VERIFY EXISTING MAIN SIZE AND FLOWLINE AT CONNECTION PRIOR TO PROCUREMENT OF MATERIALS AND INSTALLATION. CONTRACTOR TO CONTACT ENGINEER IF DISCREPANCY EXISTS. EX. FL=986.29 (±) PROP. 6" PVC FL=986.96
- **D1** TYPICAL STORM WATER DRAIN LINE FROM ROOF OR FOUNDATION DRAIN. SEE ARCH. PLANS FOR BUILDING CONNECTION LOCATIONS. ROOF DRAIN LINES SHALL BE PVC SDR 35 OR HDPE (ST). MINIMUM SLOPE SHALL BE 1.0% UNLESS OTHERWISE NOTED. MINIMUM SIZE SHALL BE 6" UNLESS OTHERWISE NOTED.
- **D2** INSTALL PRIVATE STORM SYSTEM. SEE SHEET C5 FOR PLAN & PROFILE.
- **D3** INSTALL TRENCH DRAIN (ACO KLASSIKDRAIN K100) WITH TYPE K20 END OUTLET WITH "S" 4" HDPE (ST) OUTLET PIPE. CONNECT TO ROOF DRAIN SYSTEM.
- **D4** CONVERT EXISTING 8'x8' FIELD INLET TO JUNCTION BOX. RAISE STRUCTURE BY 5'. EX. TE=989.73 PROP. TE=994.76.
- **D5** CONVERT EXISTING 8'x8' FIELD INLET TO JUNCTION BOX. RAISE STRUCTURE BY 3'. EX. TE=988.18 PROP. TE=991.18
- **D6** PROPOSED PUBLIC STORM SYSTEM. SEE SHEET C5A FOR PLAN & PROFILE.

UTILITY COMPANIES:

MISSOURI GAS ENERGY (816) 969-2218
LUCAS WALLS (LUCAS.WALLS@SUG.COM)
3025 SOUTHEAST CLOVER DRIVE
LEE'S SUMMIT, MO 64082

KANSAS CITY POWER & LIGHT CO. (816) 347-4339
PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM)
RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) (816) 347-4316
1300 HAMBLEN ROAD
LEE'S SUMMIT, MO 64081

SEWER & WATER (CITY OF LEE'S SUMMIT) (816) 969-1800
GENE WILLIAMS (PUBLICWORKS@CITYOFLS.NET)
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

WATER (CITY OF LEE'S SUMMIT) (816) 969-1240
MIKE WEISENBORN (PUBLICWORKS@CITYOFLS.NET)
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

AT&T (913) 383-4929
MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) (913) 383-4849-FAX
9444 NALL AVENUE
OVERLAND PARK, KANSAS 66207

GOOGLE FIBER

BLUEBIRD

TIMEWARNER

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC LINE
- OHP — EXISTING OVERHEAD POWER LINE
- SS — EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- BT — EXISTING BURIED TELEPHONE LINE
- W — EXISTING WATER LINE
- **G** — PROPOSED GAS LINE
- **BE** — PROPOSED BURIED ELECTRIC LINE
- **SS** — PROPOSED SANITARY SEWER LINE
- PROPOSED STORM SEWER LINE
- **W** — PROPOSED WATER LINE
- PROPOSED ROOF DRAIN

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IMPLEMENTATION

UTILITY PLAN
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

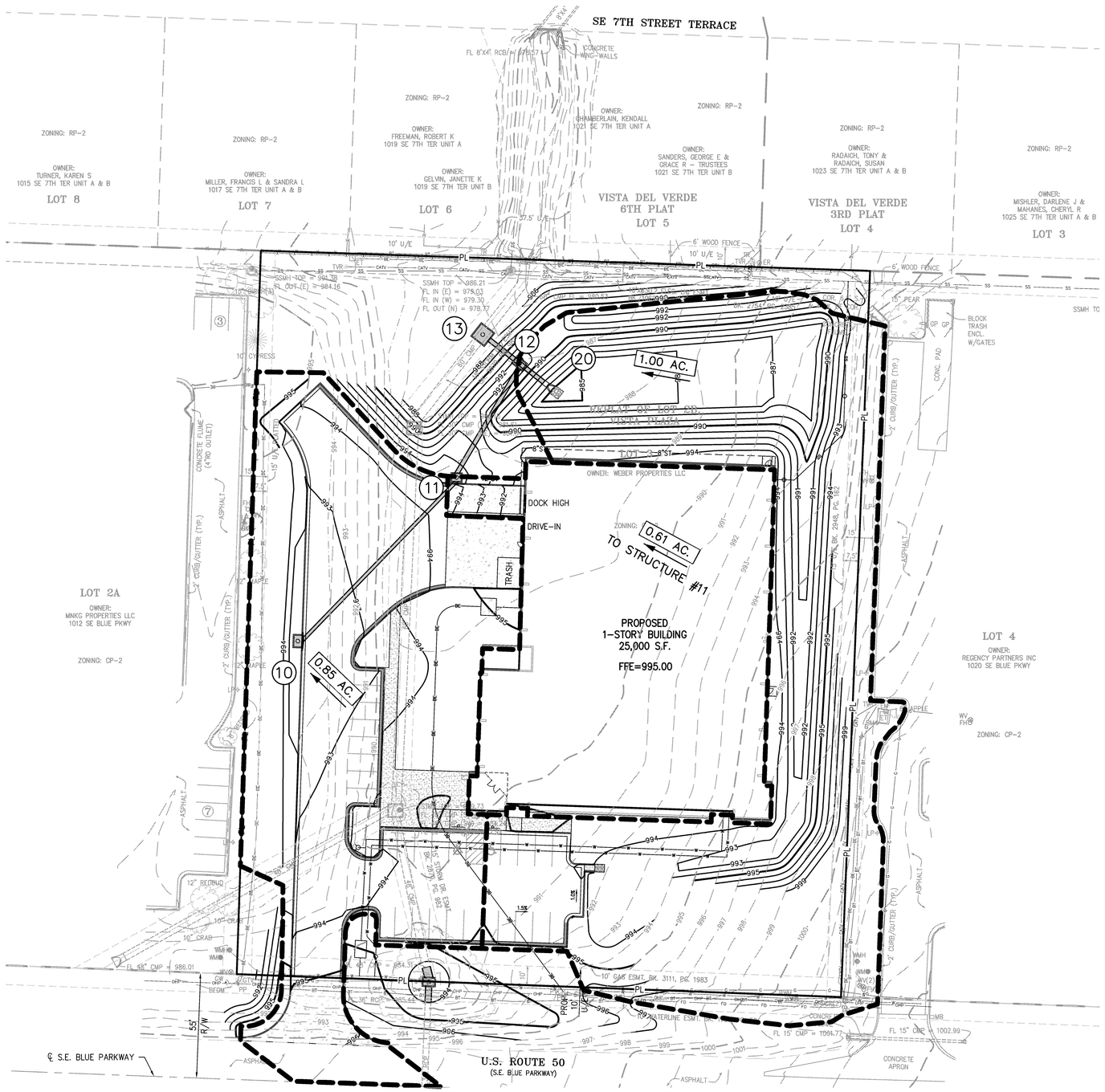
PROJECT NO. 170069
DATE: 03-16-17
CHECKED:
DRAWN: SNH
APPROVED:

CERTIFICATE OF AUTHORIZATION
KANSAS ENGINEERING - LS-82
LAND SURVEYING - L-261
ENGINEERING-2007003208

CERTIFICATE OF AUTHORIZATION
MISSOURI ENGINEERING
LAND SURVEYING-2007001128
ENGINEERING-2007003208

SHEET
C3

Z:_V\170069\DWG\Permit Plans\UTILITY.dwg Layout:1 Apr 17, 2017 - 9:53pm Daniel Finn



SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.
2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
8. EARTHWORK:

   A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

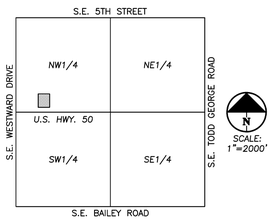
   B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

   C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.

   D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.

   E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.



VICINITY MAP
SEC. 9-47-31

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- 920 — EXISTING CONTOURS
- 918
- 920 — PROPOSED CONTOURS
- 918
- PROPOSED SPOT ELEVATION
- XXX.XX TW
- LG LIP OF GUTTER
- TC TOP OF CURB
- SW SIDEWALK
- TE TOP OF STRUCTURE
- TW TOP OF WALL
- BW BOTTOM OF WALL
- DRAINAGE BOUNDARY

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.

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

UTILITY NOTES:
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DESIGN CRITERIA: K_{25} = 1.0; K_{100} = 1.25; n = 0.013 (RCP); STORM FREQUENCY = 25 YEAR; A.I.= AREA INLET; J.B.= JUNCTION BOX; C.I. = CURB INLET; C.C. = CURB CUT; G.I. = GRATE INLET; HEIGHT OF STRUCTURE=RIM ELEV MINUS FLOWLINE OUT.

I. RUNOFF											III. PIPE DESIGN													REMARKS
		INCREMENTAL			CUMULATIVE						STRUCTURE				PIPE									
LINE NUMBER	STRUCTURE	RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	C x A	AREA "A" (ACRES)	C x A	SYSTEM TIME OF CONCENTRATION "T_c" AT STRUCTURE (MIN)	RAINFALL INTENSITY "I_{25} / I_{100}" (IN/HR)	ANTECEDENT PRECIPITATION FACTOR "K_{25} / K_{100}"	RUNOFF "Q_{25} / Q_{100}" (CFS)	Upstream Structure Number	Downstream Structure Number	Upstream Structure Rim Elevation	Height of Structure (FT)	Diameter "D" (IN)	Length "L" (FT)	Upstream Invert Elevation	Downstream Invert Elevation	Slope "S" (FT/FT)	Travel Time in Pipe "TT" (min)	Velocity Full V_f (FPS)	Runoff Q_{25} (CFS)	Runoff Q_{100} (CFS)	Full Flow Q_f (CFS)	
1	10	0.90	0.85	0.77	0.85	0.77	5.00	8.53	1.10	7.2	10	11	992.46	3.50	18	119.09	988.96	987.89	0.0090	0.35	5.7	7.2	9.9	10.0	
								10.32	1.25	9.9														
	11	0.90	0.61	0.55	1.46	1.32	5.00	8.53	1.10	12.4	11	12	994.44	7.05	18	68.10	987.39	984.66	0.0401	0.09	12.0	12.4	17.0	21.0	
								10.32	1.25	17.0														
	12	0.60	0.00	0.00	2.46	1.92	5.00	8.53	1.10	18.0	12	13	992.00	7.84	24	24.36	984.16	983.86	0.0123	0.05	8.0	18.0	24.8	25.1	
								10.32	1.25	24.8														
2	20	0.60	1.00	0.60	2.46	1.92	5.00	8.53	1.10	18.0	20	21	NA	NA	24	16.11	984.86	984.66	0.0124	0.03	8.1	18.0	24.8	25.2	
								10.32	1.25	24.8														

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
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Fax (913) 393-1156
www.phelpsengineering.com
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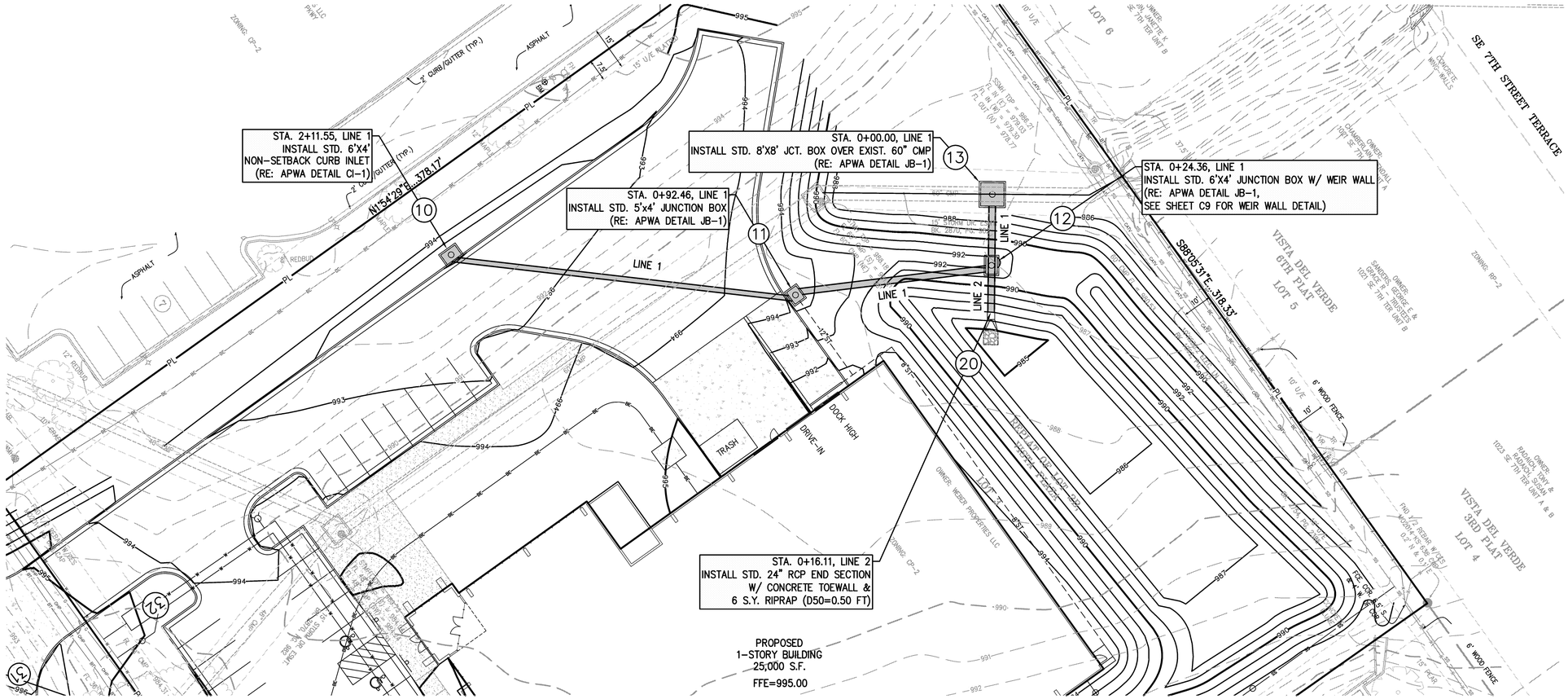
ENGINEERING
IMPLEMENTATION

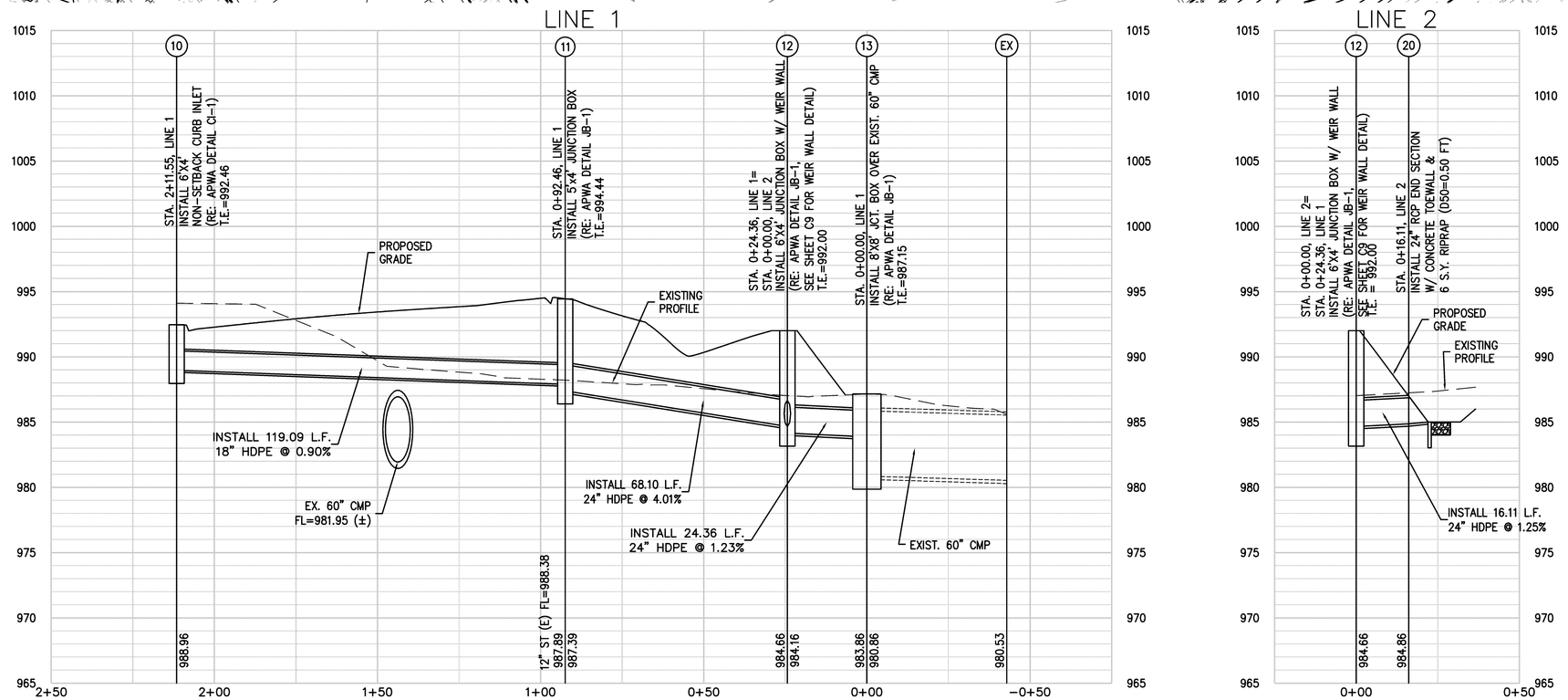
DRAINAGE MAP
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Revisions:	Date	By	App.

PROJECT NO. 1170069
DATE: 03-16-17 DRAWN: SNH
CHECKED: APPROVED:
CERTIFICATE OF AUTHORIZATION KANSAS SURVEYING - LS-82 ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007002608

SHEET
C4





SCALE: 1"=20' HORIZ.
1"= 5' VERT.

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STORM SEWER PLAN & PROFILE

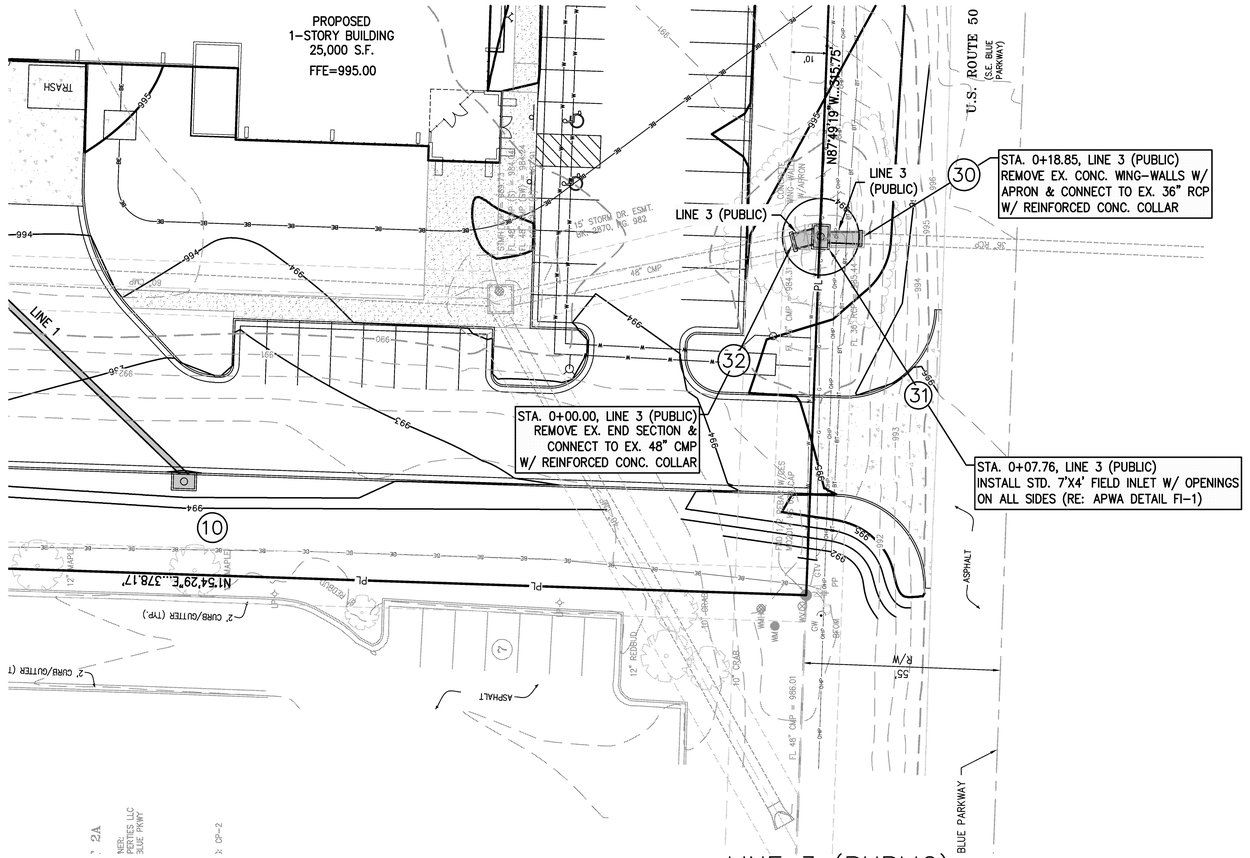
WEBER CARPET

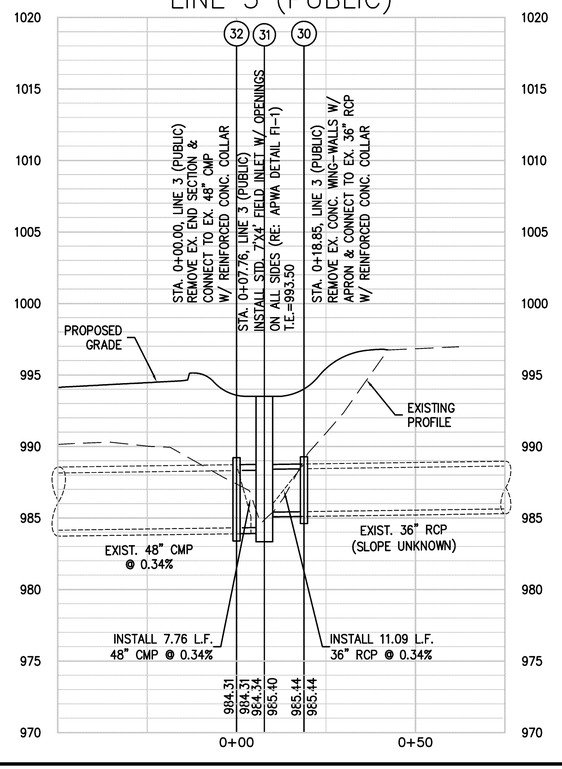
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

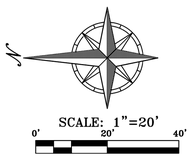
No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 05-16-17 | DRAWN: SNH
CHECKED: | APPROVED:
CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS-82
ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007003308

SHEET
C5







SCALE: 1"=20' HORIZ.
1"= 5' VERT.

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PLANNING
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IMPLEMENTATION

STORM SEWER PLAN & PROFILE

WEBER CARPET

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

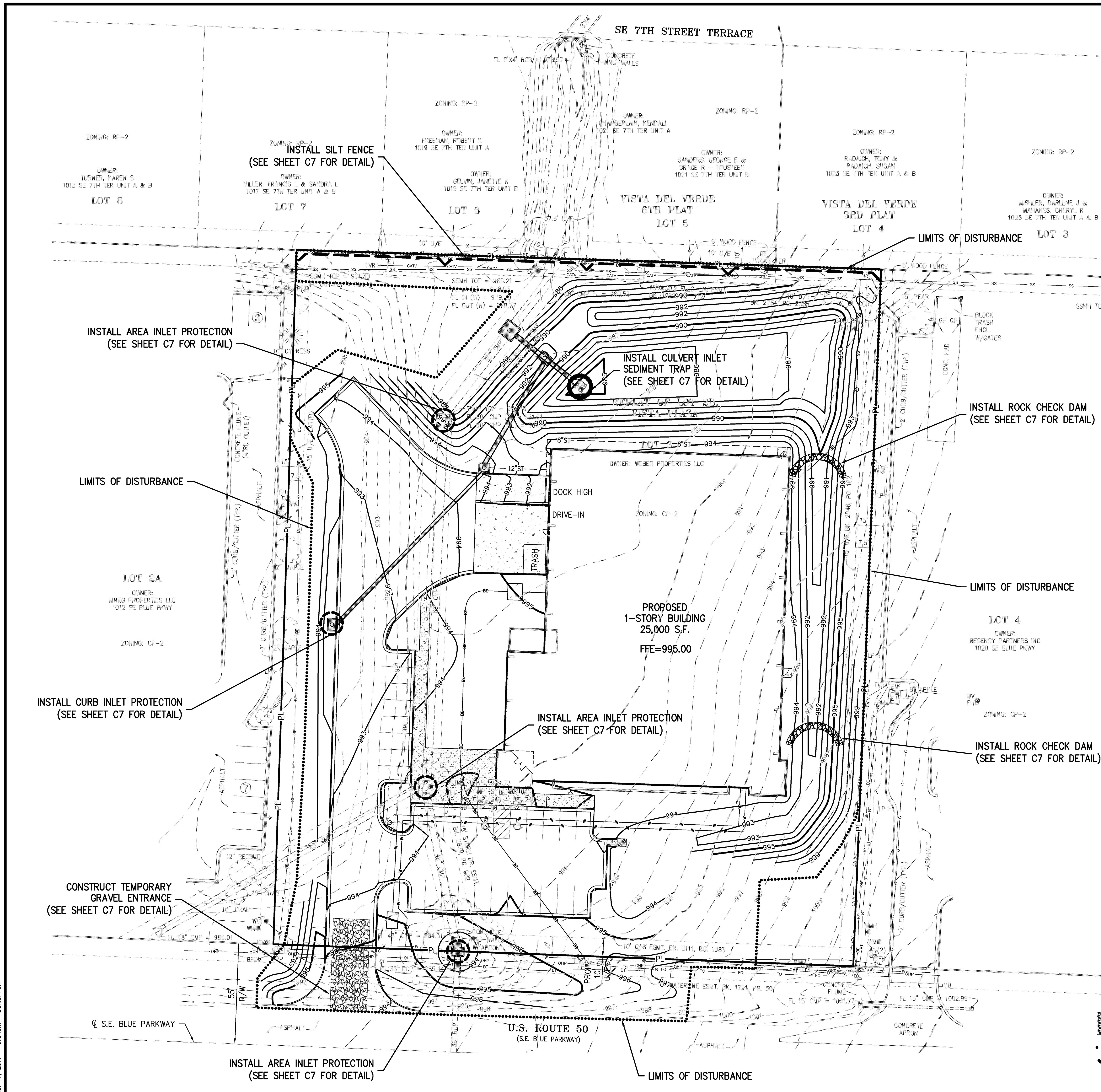
No.	Date	Revisions:	By	App.

PROJECT NO.: 170069
DATE: 03-16-17
DRAWN: SNH
CHECKED:
APPROVED:

CERTIFICATE OF AUTHORIZATION
KANSAS ENGINEERING - LS-82
MISSOURI ENGINEERING - E-3911

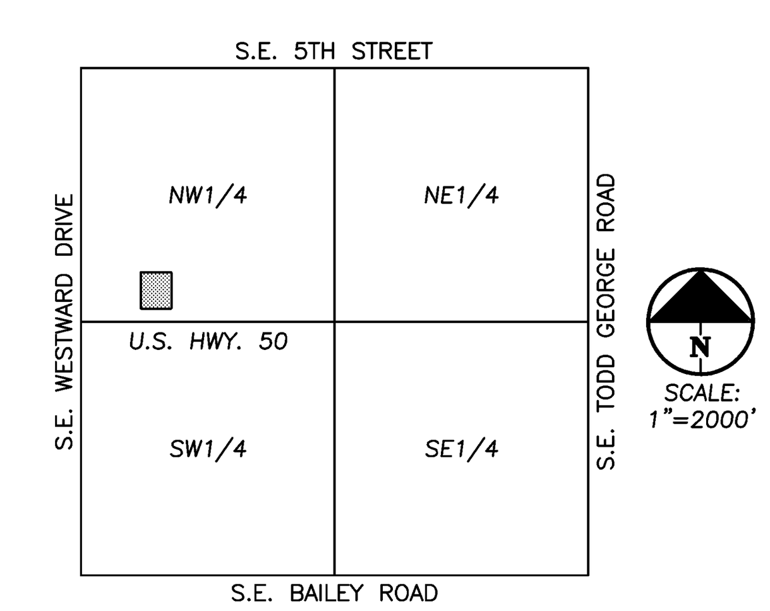
CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007035308

SHEET
C5A



LEGEND

- CONSTRUCTION ENTRANCE
- DISTURBED AREAS = 2.70 ACRES
- SILT FENCE
- INLET PROTECTION
- ROCK CHECK DAM
- CULVERT INLET SEDIMENT TRAP



VICINITY MAP
SEC. 9-47-31

SCALE: 1"=30'

0' 30' 60'

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EROSION & SEDIMENT CONTROL NOTES:

1. Prior to Land Disturbance activities, the contractor shall:
   - Delineate the outer limits of any tree or stream preservation designated to remain with construction fencing.
   - Construct a stabilized entrance/parking/delivery area and install all perimeter sediment controls on the site.
   - Install and request the inspection of the preconstruction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
   - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, placement of physical barriers or other means acceptable to the contractor and the City inspector.
2. Erosion and sediment control devices protecting the public right-of-way shall be installed as soon as the right-of-way has been backfilled and graded.
3. The contractor shall comply with all requirements of City Ordinances or State permit requirements, such as:
   - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   - The contractor shall perform inspections of erosion and sediment control measures at least once a every 14 days and within 24 hours following each rainfall event of ½" or more within any 24-hour period
   - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The log shall be available for review by the City, the State of Missouri, or other authorities having jurisdiction.
4. Unless otherwise noted in the plans, all seeding must conform to the Missouri Department of Transportation (MODOT) Standard Specifications for State Road and Bridge Construction, current edition, as amended by the most current Special Provisions.
5. The contractor shall maintain installed erosion and sediment control devices on a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, tree preservation areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel. Failure to do so is a violation of the provisions of City Ordinances and State permit requirements.
6. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMP's in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
7. Concrete wash or rinsewater from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc., may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place and excess water evaporated or infiltrated into the ground.
8. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials store outside must be in closed and sealed water-proof containers and located outside of drainageways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLANATION, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

PEI
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EROSION CONTROL PLAN
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

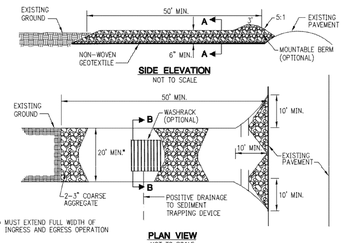
PROJECT NO. 170069
DATE: 03-16-17 DRAWN: SNH
CHECKED: APPROVED:

CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

SHEET
C6

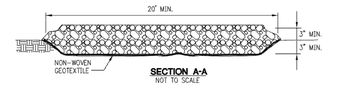
TEMPORARY CONSTRUCTION ENTRANCE



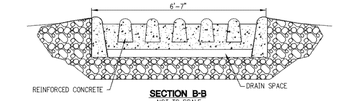
SIDE ELEVATION
NOT TO SCALE

* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

TEMPORARY CONSTRCUTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
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 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
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 SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

B) TROUBLESHOOTING:

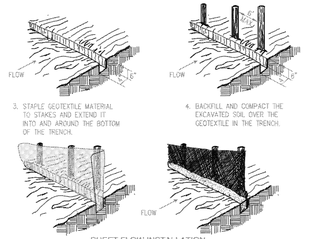
1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
   b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
TEMPORARY CONSTRUCTION ENTRANCE	STANDARD DRAWING NUMBER: ESC-06 ADOPTED:	

SEDIMENT FENCE



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)
NOT TO SCALE

DRAINAGEWAY INSTALLATION (FRONT ELEVATION)
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

SEDIMENT FENCE NOTES:

A) INSTALLATION:

1. THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SECURELY SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MAX 6-INCH OVERLAP.
3. DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG THE FENCE ALIGNMENT.
4. DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
5. EXTRA-STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MINIMUM OF ONE INCH LONG, HEAVY-DUTY WIRE STAPLES OR TIE-WIRES, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM-OF-6-INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
7. IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE, PLACED ON A CONTOUR, WITH THE ENDS ORIENTED UPSLOPE. EXTRA-STRENGTH SEDIMENT FABRIC SHALL BE USED WITH A MAXIMUM 3-FOOT SPACING OF POSTS.
8. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREAS OF HEAVY SEDIMENTATION FOR CLEAN OUT AND MAINTENANCE.
9. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

B) TROUBLESHOOTING:

1. DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
2. GRADE ALIGNMENT OF FENCE AS NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SEDIMENT COLLECTION AREA.

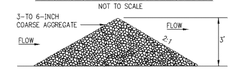
C) INSPECTION MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.

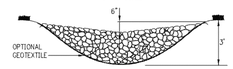
AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
SEDIMENT FENCE	STANDARD DRAWING NUMBER: ESC-05 ADOPTED:	

ROCK CHECK DAM

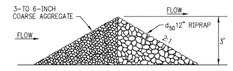
ROCK CHECK DAM
2 ACRES OR LESS OF DRAINAGE AREA
NOT TO SCALE



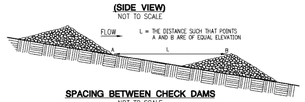
(SIDE VIEW)
NOT TO SCALE



2-10 ACRES OF DRAINAGE AREA
NOT TO SCALE



(SIDE VIEW)
NOT TO SCALE



SPACING BETWEEN CHECK DAMS
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

ROCK CHECK DAM NOTES:

A) CONSTRUCTION SPECIFICATIONS & INSTALLATION:

1. THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN A COARSE AGGREGATE IS USED ALONE AND SHALL NOT EXCEED 10 ACRES WHEN A COMBINATION OF CLASS I RIPRAP AND COARSE AGGREGATE IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE STONE TO THE TOP OF CHANNEL BANKS.
2. THE MAXIMUM HEIGHT OF THE DAM SHALL BE 3 FEET. THE CENTER OF THE CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE OUTER EDGES.
3. FOR ADDED STABILITY, THE BASE OF THE CHECK DAM CAN BE KEYED INTO THE SOIL APPROXIMATELY 6 INCHES.
4. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
5. STONE SHOULD BE PLACED ACCORDING TO THE CONFIGURATION TO THE LEFT. HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
6. GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

C) INSPECTION AND MAINTENANCE:

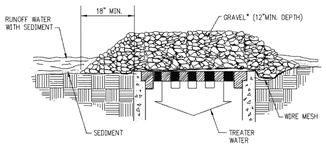
1. CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH STORM EVENT OF 1/2-INCH OR GREATER. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE DAM.
2. REGULAR INSPECTIONS SHOULD BE MADE TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED

D) REMOVAL OF PRACTICE:

UNLESS THEY ARE TO BE PERMINENT, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED WHEN THEY ARE NO LONGER NEEDED. IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS-LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE USE OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE REMOVAL OF THE STONE EASIER.

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
ROCK CHECK DAM	STANDARD DRAWING NUMBER: ESC-15 ADOPTED:	

GRAVEL AND WIRE MESH DROP INLET SEDIMENT TRAP



NOTE:
* USE CLEAN GRAVEL, 1/2" DIAMETER.

GRAVEL AND WIRE MESH DROP INLET SEDIMENT TRAP NOTES:

A) GENERAL NOTES:

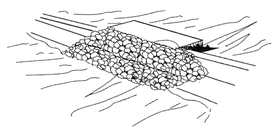
1. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
2. COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH. THE DEPTH OF STONE SHALL BE AT LEAST 12-INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18-INCHES ON ALL SIDES.
3. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET AND CLEANED OR REPLACED.

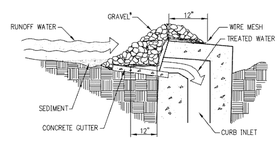
B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
GRAVEL AND WIRE MESH DROP INLET SEDIMENT TRAP	STANDARD DRAWING NUMBER: ESC-30 ADOPTED:	

GRAVEL CURB INLET SEDIMENT TRAP





CROSS SECTION
NOT TO SCALE

NOTE:
* USE CLEAN GRAVEL 1/2" TO 1" IN DIAMETER.

SOURCE: MODIFIED FROM VA. DCR, 1992

GRAVEL CURB INLET SEDIMENT TRAP NOTES:

A) GENERAL NOTES:

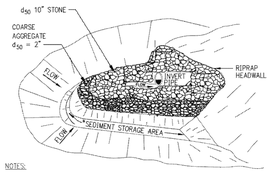
1. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE INLET COVER AND AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE CONCRETE GUTTER FROM THE INLET OPENING.
2. STONE SHALL BE PILED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET COVER AND TO COVER THE INLET OPENING COMPLETELY.
3. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCK AND CLEANED OR REPLACED.

B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

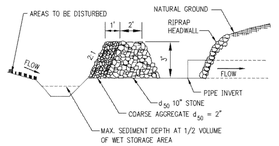
AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
GRAVEL CURB INLET SEDIMENT TRAP	STANDARD DRAWING NUMBER: ESC-25 ADOPTED:	

CULVERT INLET SEDIMENT TRAP



NOTES:
1. STORAGE REQUIREMENTS EQUIVALENT TO THAT OF TEMPORARY SEDIMENT TRAP.
2. 67 C.Y./ACRE WET STORAGE BELOW BASE OF STONE.
3. 67 C.Y./ACRE DRY STORAGE FROM BASE OF STONE TO TOP OF STONE BERM.

PERSPECTIVE VIEW



ELEVATION
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

CULVERT INLET SEDIMENT TRAP NOTES:

A) CONSTRUCTION SPECIFICATIONS:

1. GEOMETRY OF THE DESIGN WILL BE A HORSESHOE SHAPE AROUND THE CULVERT INLET.
2. THE TOE OF RIPRAP SHALL BE NO CLOSER THAN 24" FROM THE CULVERT OPENING TO PROVIDE AN ACCEPTABLE EMERGENCY OUTLET FOR FLOWS FROM LARGER STORM EVENTS.
3. ALL CONSTRUCTION SPECIFICATIONS FOUND WITHIN TEMPORARY SEDIMENT TRAP SPECIFICATIONS APPLY TO THIS PRACTICE.
4. THE PROPER INSTALLATION OF THE CULVERT INLET SEDIMENT TRAP IS A VIABLE SUBSTITUTE FOR THE INSTALLATION OF THE TEMPORARY SEDIMENT TRAP.

B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER, AND REPAIRS SHALL BE MADE AS NEEDED.
2. AGGREGATE SHALL BE REPLACED OR CLEANED WHEN INSPECTION REVEALS THAT CLOGGED VOIDS ARE CAUSING PONDING PROBLEMS WHICH INTERFERE WITH ON-SITE CONSTRUCTION.
3. SEDIMENT SHALL BE REMOVED AND THE IMPOUNDMENT RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.
4. TEMPORARY STRUCTURES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

C) GENERAL GUIDELINES:

1. THE INLET PROTECTION DEVICE SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENT AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES.
2. THE INLET PROTECTION DEVICES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT ANY RESULTANT PONDING STORMWATER WILL NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

AMERICAN PUBLIC WORKS ASSOCIATION		
APWA	KANSAS CITY METROPOLITAN CHAPTER	
CULVERT INLET SEDIMENT TRAP	STANDARD DRAWING NUMBER: ESC-27 ADOPTED:	

PHELPS ENGINEERING, INC.
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(913) 393-1155
FAX (913) 393-1166
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

EROSION CONTROL DETAILS

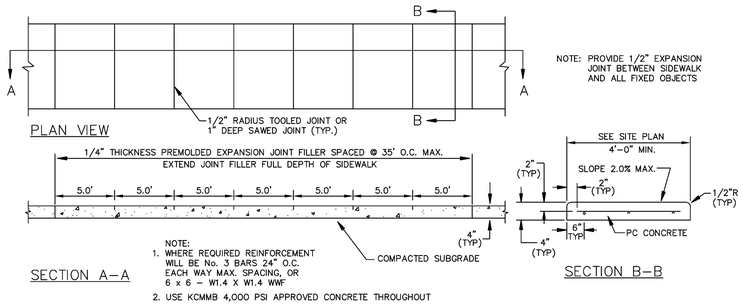
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

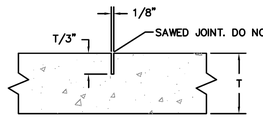
PROJECT NO. 1720069
DATE: 03-16-17 | DRAWN: SNH
CHECKED:
APPROVED:
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82
MISSOURI ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
ENGINEERING-2007005008

SHEET
C7

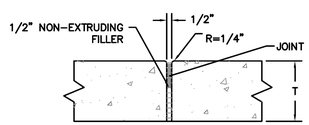
Z:\P\1720069\DWG\Permit Plans\EROSION.dwg Layout:2 Apr 17, 2017 - 9:55pm Daniel Finn



CONCRETE SIDEWALK



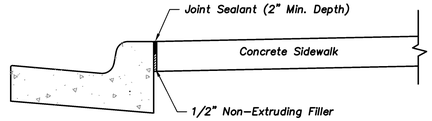
TYPE A JOINT
REV. 08/13/03



TYPE B JOINT
REV. 08/13/03

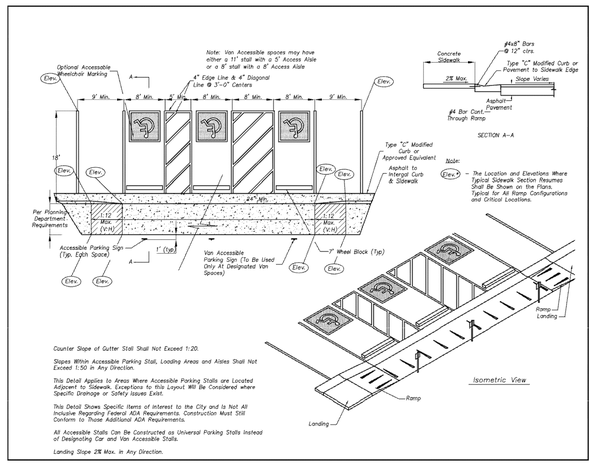
NOTE: TYPE A JOINTS SHALL NOT EXCEED 20 TIMES THE PAVEMENT THICKNESS (T)

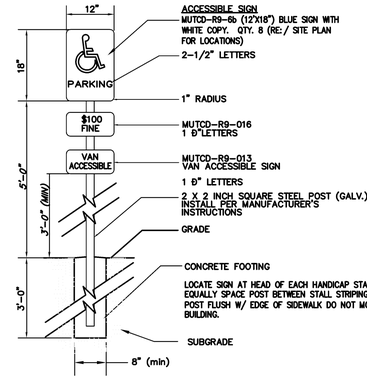
CONCRETE JOINT DETAILS



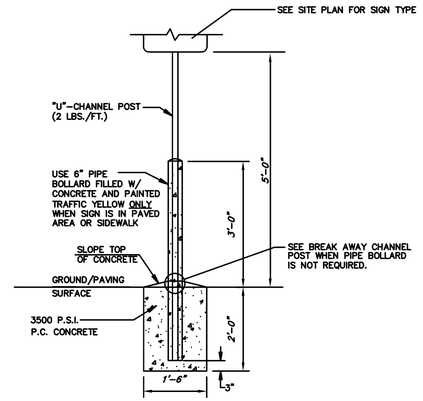
All other details same as shown per this sheet.

SIDEWALK AT CURB DETAIL

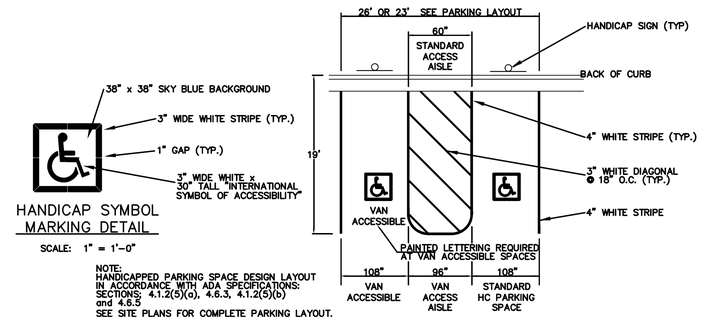




HANDICAPPED SIGN DETAIL IN GRASS AREA



SIGN BASE DETAIL IN SIDEWALK AND PAVED AREAS

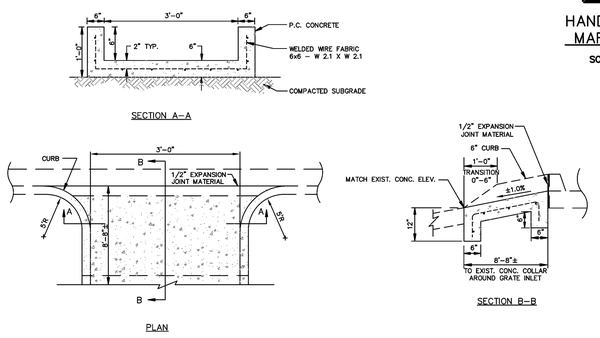


HANDICAP SYMBOL MARKING DETAIL

SCALE: 1" = 1'–0"

NOTE:
HANDICAPPED PARKING SPACE DESIGN LAYOUT IN ACCORDANCE WITH ADA SPECIFICATIONS: SECTIONS; 4.1.2(5)(a), 4.6.3, 4.1.2(5)(b) and 4.6.5
SEE SITE PLANS FOR COMPLETE PARKING LAYOUT.

HANDICAPPED PARKING SPACE DETAIL



CONCRETE FLUME DETAIL

N.T.S.

PHELPS ENGINEERING, INC.
1270 N. Winchester
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(913) 393-1155
FAX (913) 393-1156
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PLANNING
ENGINEERING
IMPLEMENTATION

STANDARD DETAILS

WEBER CARPET

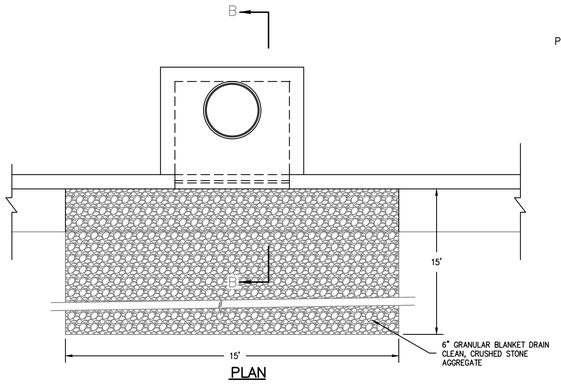
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

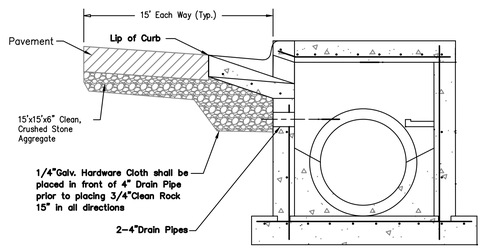
No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 03–16–17 | DRAWN: SNH
CHECKED: | APPROVED:

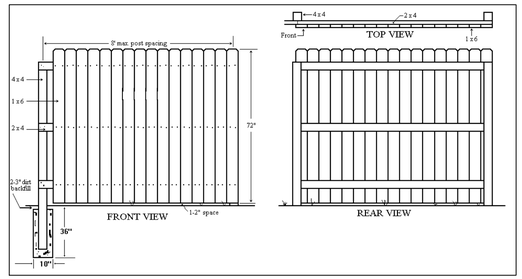
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING – LS–82
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING– 2007002128
ENGINEERING– 2007002308

SHEET
C8





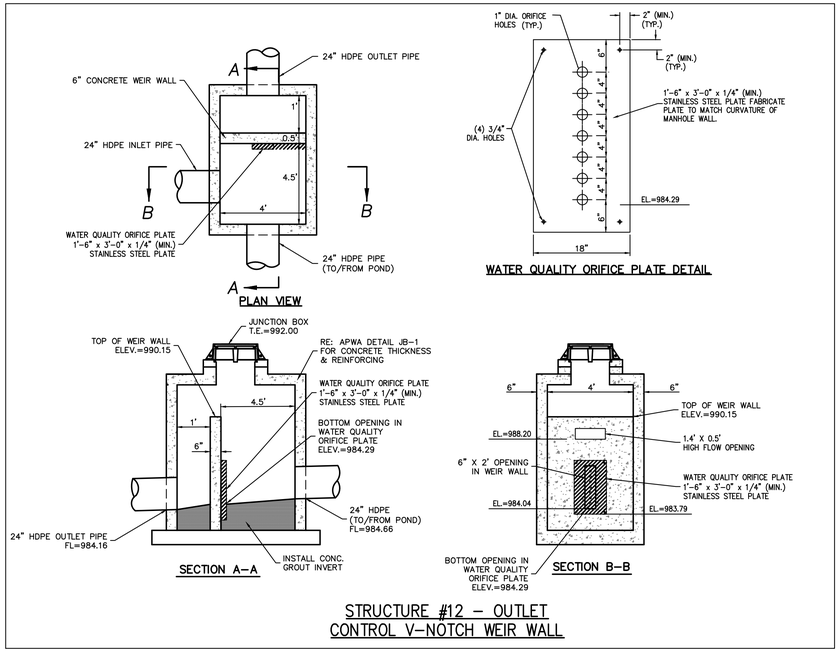
SECTION B-B



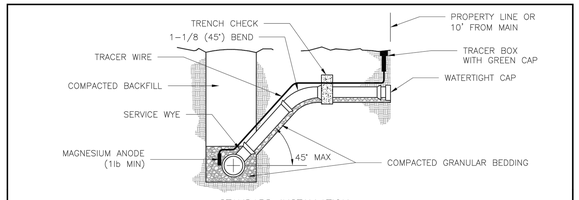
PIPE DIAMETER	MIN. TRENCH WIDTH *
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	58"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

*trench centered on pipe

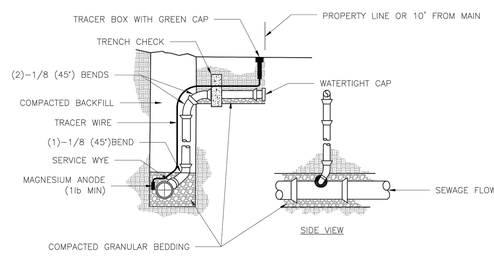
GRANULAR BLANKET DRAIN ADJACENT TO CURB INLETS



STRUCTURE #12 - OUTLET CONTROL V-NOTCH WEIR WALL



STANDARD INSTALLATION
NOT TO SCALE



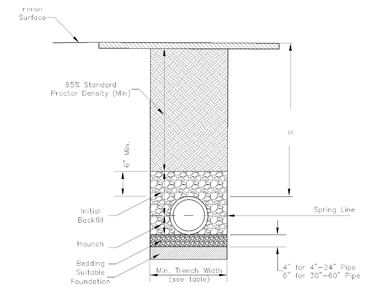
VERTICAL RISER
NOT TO SCALE

NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

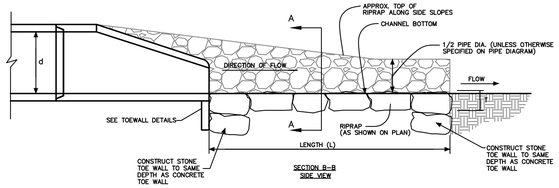
LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 12/13 Drawn By: SC Checked By: DL FILE: SAN-1
	BUILDING SEWER STUB AND RISER	Rev: 10/15 Rev: 12/15

NOTES:

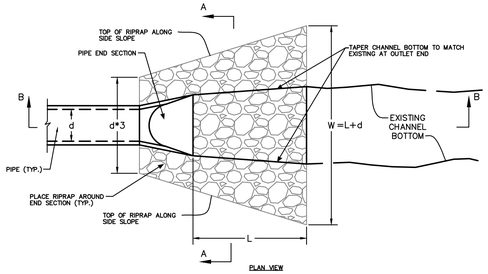
1. All pipe systems shall be installed in accordance with ASTM D2321, "Standard practice for underground installation of thermoplastic pipe for sewers and other gravity flow applications", latest edition
2. Measures should be taken to prevent migration of native fines into backfill material when required.
3. FOUNDATION: Where the trench bottom is unstable, the contractor shall excavate to a depth required by the engineer and replace with suitable material as specified by the engineer. As an alternative and at the discretion of the design engineer, the trench bottom may be stabilized using Geotextile material.
4. BEDDING: Suitable material shall be ASTM Class IA or ASTM Class IB, KDOT PB-2 or KDOT PB-3 or similar crushed aggregate product as approved. The contractor shall provide documentation for material specification to engineer, unless otherwise noted by the engineer. Minimum bedding thickness shall be 4" for 4"-24" diameter pipe; 6" for 30"-60" diameter pipe.
5. INITIAL BACKFILL: Suitable material shall be ASTM Class IA or ASTM Class IB, KDOT PB-2 or KDOT PB-3 or similar crushed aggregate product as approved in the pipe zone extending not less than 6" above crown of pipe. The contractor shall provide documentation for material specifications to engineer. Material shall be installed in accordance with ASTM D2321, latest edition. Install and compact in 6" maximum lifts.
6. MINIMUM COVER: Minimum cover, H, in non-traffic applications (grass or landscape areas) is 18" from top of pipe to ground surface. Additional cover may be required to prevent flotation. For traffic applications, minimum cover, H, is 18" up to 24" diameter pipe and 24" of cover for up to 60" diameter pipe, measured from top of pipe to bottom of flexible pavement or to top of rigid pavement.



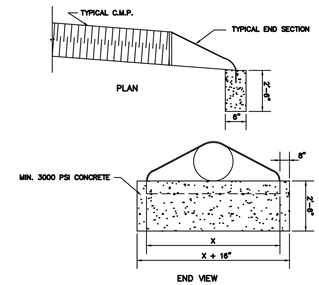
HDPE INSTALLATION DETAIL



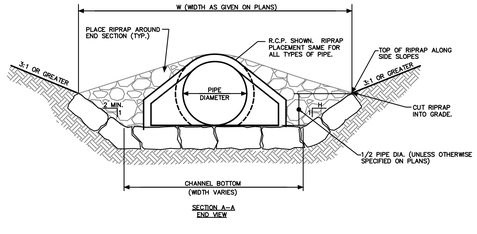
SIZE OF RIPRAP SHALL BE PLAIN STONE (150# MIN.)
PLACING - THE RIPRAP NEED NOT BE COMPACTED BUT SHALL BE PLACED TO GRADE IN A MANNER TO INSURE THAT THE LARGER ROCK FRAGMENTS ARE UNIFORMLY DISTRIBUTED AND THE SMALLER ROCK FRAGMENTS SERVE TO FILL THE SPACES BETWEEN THE LARGER ROCK FRAGMENTS IN SUCH A MANNER AS WILL RESULT IN WELL-KEYED, DENSELY PLACED, UNIFORM LAYERS OF RIPRAP OF THE SPECIFIED THICKNESS. HAND PLACING WILL BE REQUIRED ONLY TO THE EXTENT NECESSARY TO SECURE THE RESULTS SPECIFIED ABOVE. RIPRAP SHALL BE CUT INTO THE GRADE AS SHOWN.



RIPRAP INSTALLATION DETAIL



TYPICAL END SECTION DETAIL



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STANDARD DETAILS
WEBER CARPET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 170069
DATE: 03-16-17 | DRAWN: SNH
CHECKED: | APPROVED:
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82 MISSOURI ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128 ENGINEERING-2007005038

SHEET
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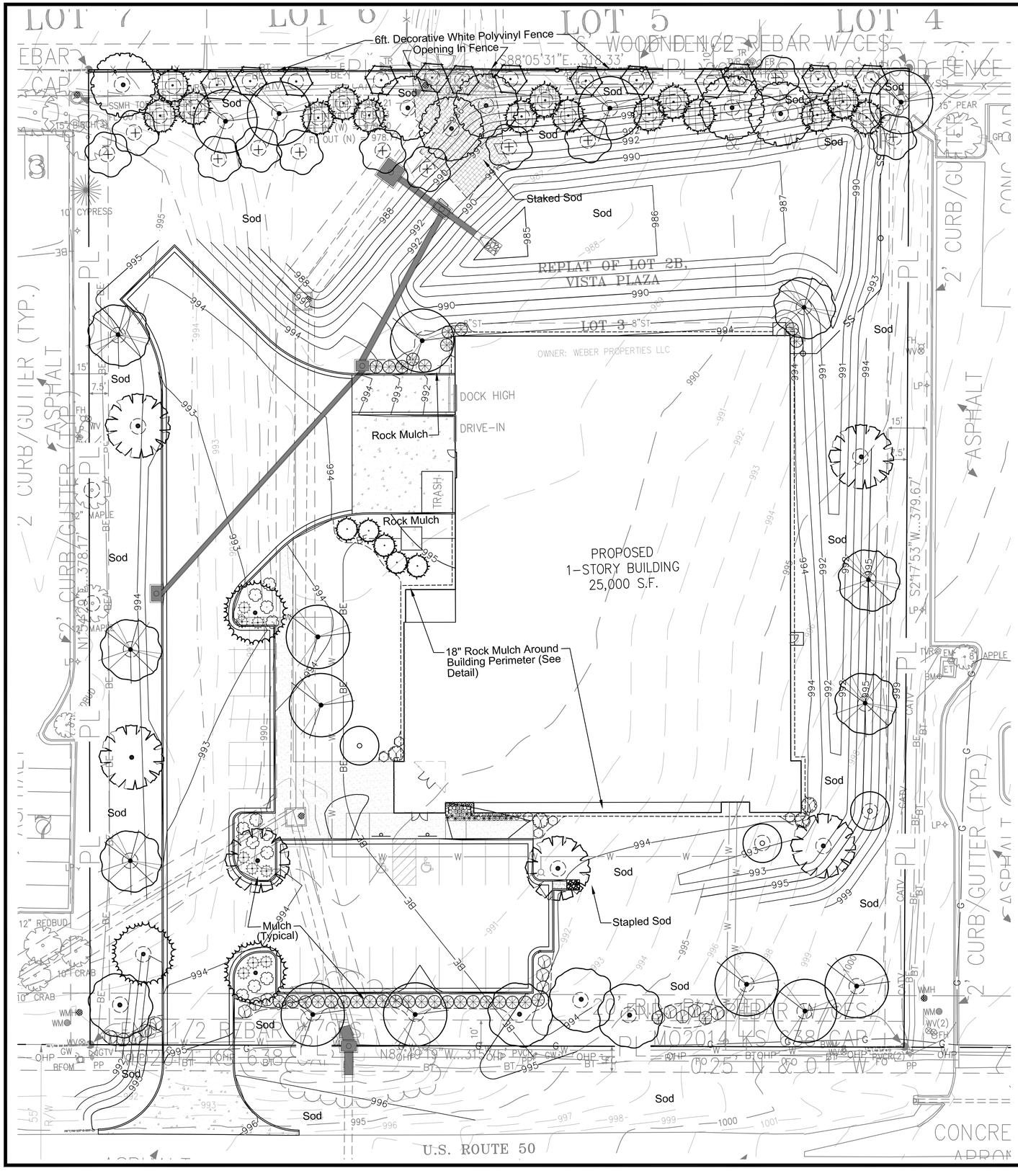
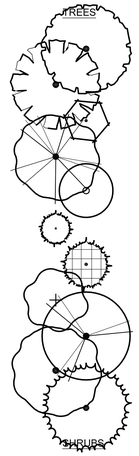


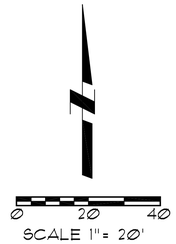
PLANT SCHEDULE



TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE
	6	Acer campestre `Queen Elizabeth` / Queen Elizabeth Hedge Maple	B & B	3"Cal	
	6	Acer freemanii `Autumn Blaze` / Autumn Blaze Maple	B & B	3"Cal	
	13	Amelanchier x grandiflora `Autumn Brilliance` / `Autumn Brilliance` Serviceberry Multi Stem	B & B		6` hgt.
	6	Betula nigra `Heritage` / Heritage River Birch	B & B	3"Cal	
	3	Cercis canadensis / Eastern Redbud	B & B	3"Cal	
	5	Juniperus virginiana `Canaertii` / Canaerti Juniper	B & B		8` hgt.
	15	Juniperus virginiana `Hillspire` / Hillspire Juniper	B & B		8` hgt.
	11	Koelreuteria paniculata / Golden Rain Tree	B & B	3"Cal	
	12	Quercus bicolor / Swamp White Oak	B & B	3"Cal	
	4	Quercus shumardii / Shumard Red Oak	B & B	3"Cal	
	3	Taxodium distichum / Bald Cypress	B & B	3"Cal	

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT
⊕	18	Calamagrostis acutiflora `Karl Foerster` / Feather Reed Grass 24"-30" hgt.	3 gal
⊗	6	Ceratostigma plumbaginoides `Blue Plumbago` / Blue Plumbago	1 gal
⬡	6	Hypericum frondosum `Sunburst` / Sunburst Hypericum 18"-24" hgt. & sp.	3 gal
⊛	31	Juniperus chinensis `Sea Green` / Sea Green Juniper 24"-30" hgt. & sp.	5 gal
⊜	9	Juniperus virginiana `Grey Owl` / Grey Owl Juniper 24"-30" sp.	3 gal
✺	4	Physocarpus opulifolius `Center Glow` / Center Glow Ninebark 24"-30" hgt. & sp.	3 gal
⬠	12	Rhus aromatica `Gro-Low` / Gro-Low Fragrant Sumac 18"-24" hgt. & sp.	3 gal
⬟	17	Rhus typhina `Tiger Eyes` / Tiger Eyes Sumac 24"-30" hgt. & sp.	3 gal
○	14	Schizachyrium scoparium `Little Munchkin` / Little Munchkin Little Bluestem 15"-18" hgt.	1 gal
✳	12	Sporobolus heterolepis / Prairie Dropseed 15"-18" hgt.	2 gal

Buffer Note:
Given the utility locations, terrain and the placement of a 6ft. polyvinyl decorative white fence in this location we feel the fence should be located on the property line. Given the decorative nature of the new fence we feel placement on the property line is appropriate as was done on the property to the west. The utility easement and locations are also a severe impediment to plant placement. The detention basin restricts plant locations as well. However, all required plants are shown.



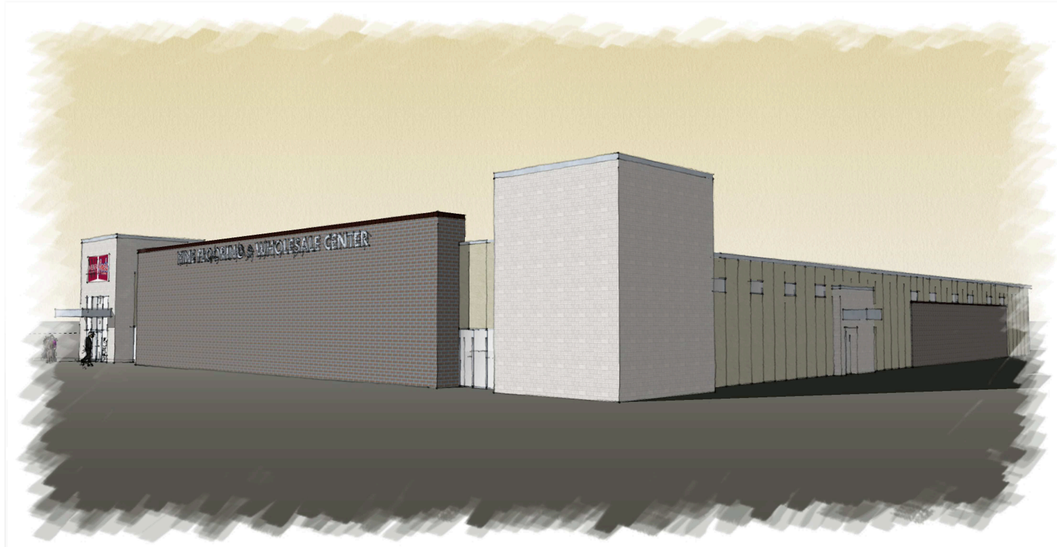
Landscape Plan
Weber Carpet

Lee's Summit, Missouri

Oppermann LandDesign, LLC
Land Planning & Landscape Architecture
18990 West 117th Street
Olathe, Kansas 66061
oppermannlanddesign.com
pete@oppermannland.com
913.894.9407

4/17/2017

Weber Flooring - Preliminary Development Concept



SE Blue Parkway - View From Southeast

Primary Entry - View From Southwest

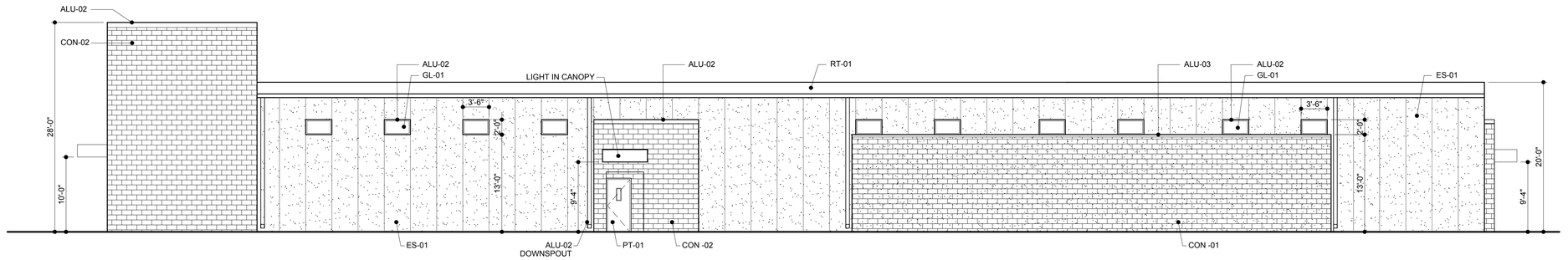
Back of Building - View From Northeast

Dock Area - View From Northwest

Concept Design 3

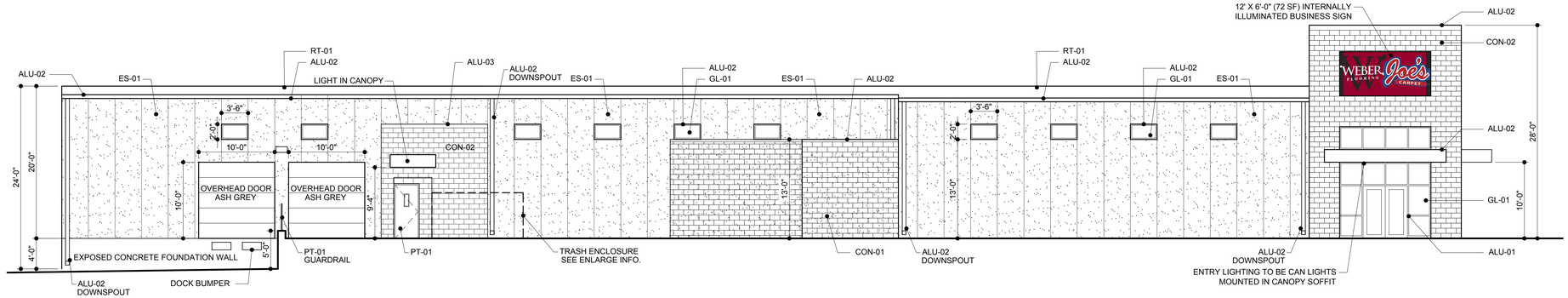
April 17, 2017

FOCUS ARCHITECTURE, LLC



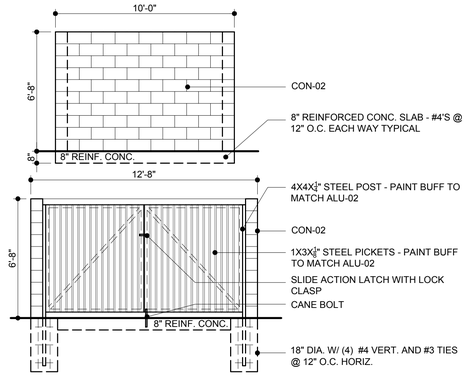
4 EAST ELEVATION

1/8" = 1'-0"



3 WEST ELEVATION

1/8" = 1'-0"



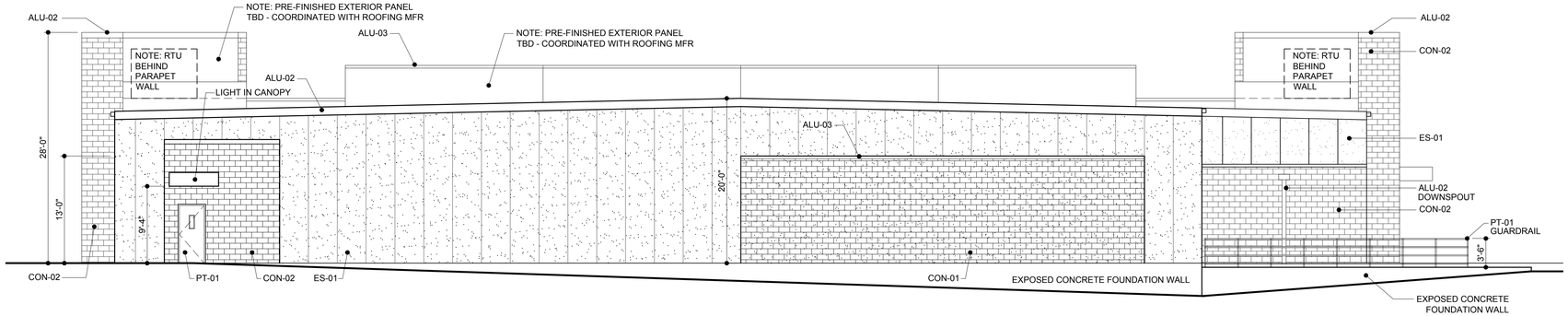
6 TRASH ENCLOSURE

1/4" = 1'-0"

EXTERIOR MATERIAL LEGEND			
KEY	MATERIAL	MANUFACTURER	COLOR #
CON-01	SPLIT FACE DECORATIVE CMU	MIDWEST BLOCK & BRICK	BLACK WALNUT
CON-02	SMOOTH DECORATIVE CMU	MIDWEST BLOCK & BRICK	IRONWOOD
ALU-01	ALUMINUM STOREFRONT	EFCO OR EQUAL	ANODIZED ALUMINUM
ALU-02	ALUMINUM TRIM	TBD	ASH GREY
ALU-03	ALUMINUM TRIM	TBD	BRONZE
ES-01	TUFF WALL STUCCO	METL SPAN	WARM LIMESTONE
GL-01	1" INSULATED GLASS		CLEAR
PT-01	PAINT	SHERWIN WILLIAMS	ASH GREY
RT-01	METAL SEAM ROOFING	TBD	ASH GREY

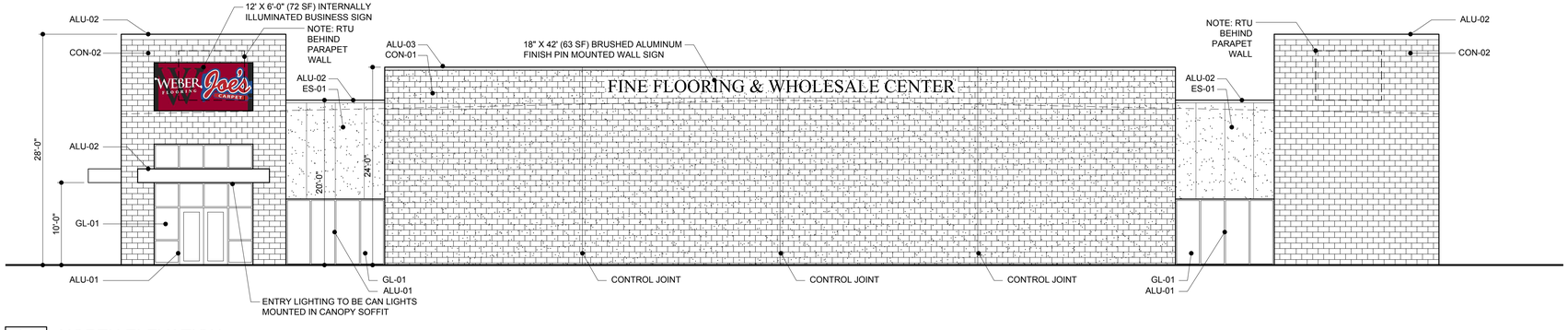
5 EXTERIOR FINISH LEGEND

NTS



2 SOUTH ELEVATION

1/8" = 1'-0"



1 NORTH ELEVATION

1/8" = 1'-0"

FOCUS ARCHITECTURE, LLC

PROJECT TEAM
Architect:
Focus Architecture, L.L.C.
10565 Widmer Rd.
Lenexa, Kansas 66215
P: 913.339.9448
www.focusarch.wordpress.com

Civil Engineer:
Phelps Engineering, Inc.
1270 N. Winchester
Olathe, Kansas 66061
P: 913.393.1155
www.phelpsengineering.com

WEBER FLOORING

Lee's Summit, MO.
Jackson County

Preliminary Development

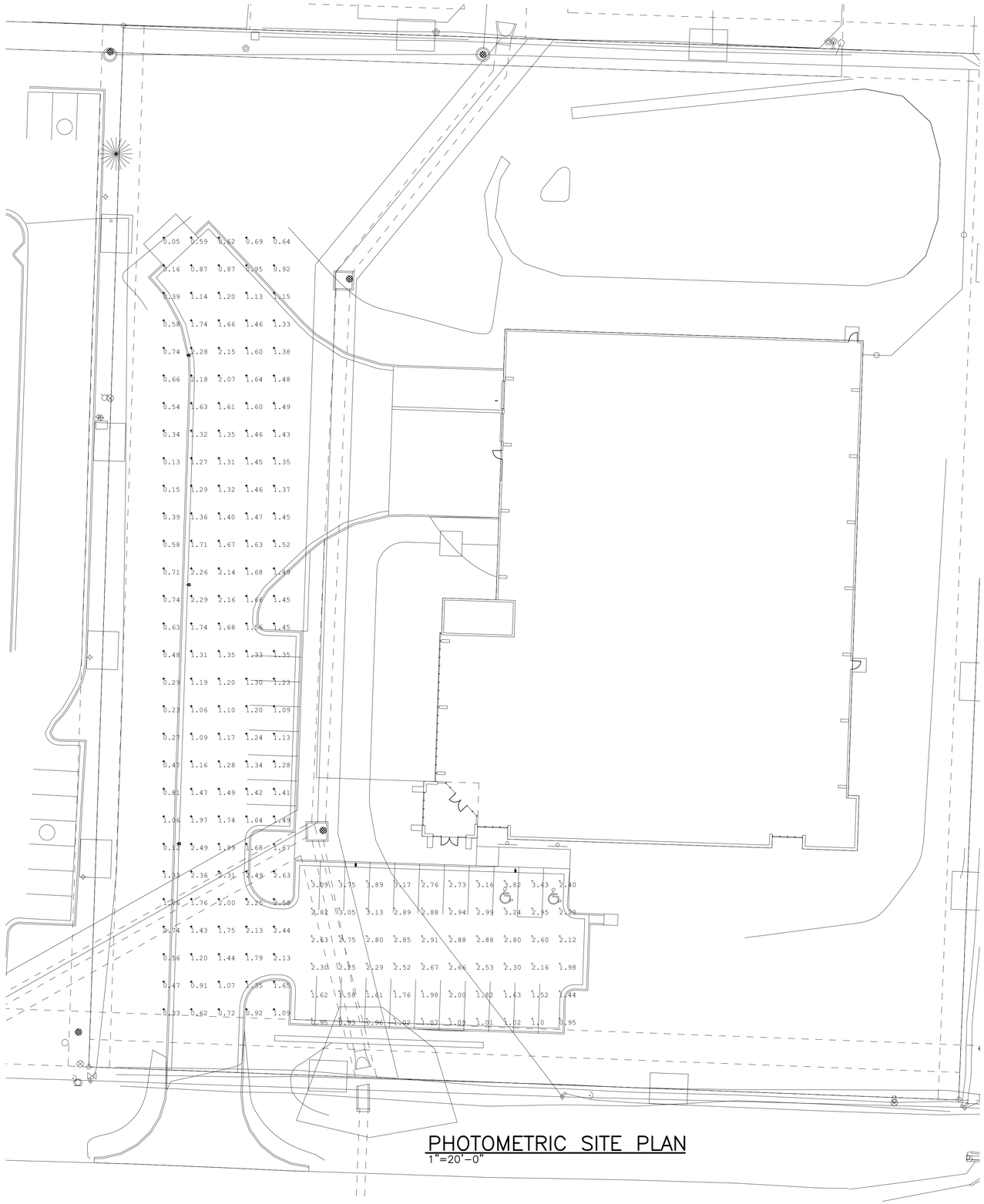
01	3-17-17	Dev. Approval Dwgs.
02	4-17-17	Rev. Dev. Approval Dwgs.

Keyplan / North Arrow

Proj. #:	17002.00	Date:	4/17/2017
Drawn:	JDR	Checked:	
PIC:			JDR

EXTERIOR ELEVATIONS

A-1.0



PHOTOMETRIC SITE PLAN
1"=20'-0"

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	LAMP	VOLTS / WATTS	DESCRIPTION
P1	WILLIAMS # DSX1-40C-1000-40K-T4	LED 4000K	208 / 105	SINGLE HEAD LED PARKING LOT LIGHT FIXTURE WITH SATIN ALUMINUM FINISH AND TYPE 4 DISTRIBUTION, HOUSE SIDE SHIELD, MOUNTED TO A 22'-6" TALL, STRAIGHT STEEL POLE. INSTALL POLE ON AN 24" DIAMETER CONCRETE BASE EXTENDING ABOVE FINISHED GRADE 2'-6".

PHOTOMETRIC CALCULATIONS

AREA	AVERAGE (FC)	MAXIMUM (FC)	MINIMUM (FC)	AVG./MIN. (FC)	MAX./MIN. (FC)
PARKING LOT	1.99	3.89	0.95	2.10	4.10

FOCUS ARCHITECTURE, LLC

PROJECT TEAM
Architect:
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www.focusarch.wordpress.com

Civil Engineer:
Phelps Engineering, Inc.
1270 N. Winchester
Olathe, Kansas 66061
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WEBER FLOORING

Lee's Summit, MO.
Jackson County

Preliminary Development

01	3-17-17	Dev. Approval Dwgs

Keyplan / North Arrow

Proj. #: 17002.00 Date: 3/17/2017
Drawn: JDR Checked:
PIC JDR

PHOTOMETRIC PLAN

PH-1.0

(mast arm not included)

d"series

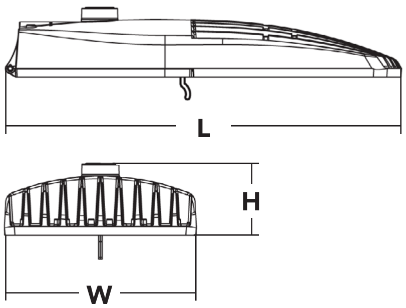
D-Series Size 1
Mast Arm Mount LED Area Luminaire

Catalog Number	
Notes	
Type	

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.9 ft² *(0.08 m²)*
Length:	27″ *(68.6 cm)*
Width:	13″ *(33.0 cm)*
Height:	5″ *(12.7 cm)*
Weight (max):	26 lbs *(11.8 kg)*



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM®2 or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT MA DDBXD

DSX1 LED								
Series	**LEDs**	**Drive current**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**	**Options**	**Finish** *(required)*
DSX1 LED	**Forward optics** 30C 30 LEDs (one engine) 40C 40 LEDs (two engines) 60C 60 LEDs (two engines) **Rotated optics** 60C 60 LEDs (two engines)	530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K (80 CRI min.) 40K 4000 K (70 CRI min.) 50K 5000 K (67 CRI)	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 [2] 480 [2]	MA Mast arm ready	**Shipped installed** (blank) No NEMA twist-lock receptacle (decorative cover), wildlife shield, trigger latch, and bridge fitter. DMG 0-10V dimming driver (no controls) PER NEMA twist-lock receptacle only (no controls) DCR Dimmable and controllable via ROAM® (no controls) [3] HS House-side shield [4] WTB Utility terminal block DS Dual switching [5,6] BUBLVL External bubble level L90 Left rotated optics [7] R90 Right rotated optics [7]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Ordering Information

Accessories

Ordered and shipped separately.

SB0R 10 ODP BZ 3V	Pole-mounted motion/ambient sensor, 8-15' mounting height, MVOLT (specify finish)
SB0R 6 ODP BZ 3V	Pole-mounted motion/ambient sensor, 15-30' mounting height, MVOLT (specify finish)
DLL127F 1.5 JU	Photocell - SSL twist-lock, MVOLT [8]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [8]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [8]
DSHORT SBK U	Shorting cap [8]
DSX1HS 30C U	House-side shield for 30 LED unit
DSX1HS 40C U	House-side shield for 40 LED unit
DSX1HS 60C U	House-side shield for 60 LED unit

For more control options, visit Sensor Switch, DTL and ROAM online.

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and educational tools.

NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60Hz).
2. Not available with single board, 530 mA product (30C 530 or 60C 530 DS). Not available with DCR.
3. Specifies a ROAM® enabled luminaire with 0-10V dimming capability; requires NEMA twist-lock receptacle. Not available with 347 or 480V. Additional hardware and services required for ROAM® deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net.
4. Also available as a separate accessory; see Accessories information at left.
5. Requires two light engines. Provides 50% dimming capability via two independent drivers, each operating half the luminaire. N/A with PER, DCR, WTB or 530mA with 347v or 480v.
6. Requires an additional switched line.
7. Available with 60 LEDs (60C option) only.
8. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000K)					40K (4000K)					50K (5000K)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30C (30 LEDs)	700 mA	68 W	T1S	7,554	1	0	1	111	8,112	2	0	2	119	8,163	2	0	2	120
			T2S	7,789	2	0	2	115	8,364	2	0	2	123	8,416	2	0	2	124
			T2M	7,610	1	0	2	112	8,172	2	0	2	120	8,223	2	0	2	121
			T3S	7,601	1	0	2	112	8,162	2	0	2	120	8,213	2	0	2	121
			T3M	7,670	1	0	2	113	8,236	2	0	2	121	8,288	2	0	2	122
			T4M	7,774	1	0	2	114	8,348	2	0	2	123	8,400	2	0	2	124
			TFTM	7,658	1	0	2	113	8,223	1	0	2	121	8,275	1	0	2	122
			T5VS	8,090	2	0	0	119	8,687	3	0	1	128	8,742	3	0	1	129
			T5S	8,150	2	0	0	120	8,751	3	0	0	129	8,806	3	0	0	130
			T5M	8,164	3	0	1	120	8,767	3	0	2	129	8,821	3	0	2	130
			T5W	8,044	3	0	1	118	8,638	3	0	2	127	8,692	3	0	2	128
	1000 mA	105 W	T1S	10,331	2	0	2	98	11,094	2	0	2	106	11,163	2	0	2	106
			T2S	10,652	2	0	2	101	11,438	2	0	2	109	11,510	2	0	2	110
			T2M	10,408	2	0	2	99	11,176	2	0	3	106	11,246	2	0	3	107
			T3S	10,395	2	0	2	99	11,163	2	0	2	106	11,233	2	0	2	107
			T3M	10,490	2	0	2	100	11,264	2	0	2	107	11,335	2	0	2	108
			T4M	10,632	2	0	2	101	11,417	2	0	2	109	11,488	2	0	2	109
			TFTM	10,473	2	0	2	100	11,247	2	0	3	107	11,317	2	0	3	108
			T5VS	11,064	3	0	1	105	11,881	3	0	1	113	11,955	3	0	1	114
			T5S	11,145	3	0	1	106	11,968	3	0	1	114	12,043	3	0	1	115
			T5M	11,165	3	0	2	106	11,989	4	0	2	114	12,064	4	0	2	115
			T5W	11,001	3	0	2	105	11,813	4	0	2	113	11,887	4	0	2	113
40C (40 LEDs)	700 mA	89 W	T1S	9,984	2	0	2	112	10,721	2	0	2	120	10,788	2	0	2	103
			T2S	10,294	2	0	2	116	11,054	2	0	2	124	11,123	2	0	2	106
			T2M	10,059	2	0	2	113	10,801	2	0	3	121	10,869	2	0	3	104
			T3S	10,046	2	0	2	113	10,788	2	0	2	121	10,855	2	0	2	103
			T3M	10,137	2	0	2	114	10,886	2	0	2	122	10,954	2	0	2	104
			T4M	10,275	2	0	2	115	11,033	2	0	2	124	11,102	2	0	2	106
			TFTM	10,122	2	0	2	114	10,869	2	0	2	122	10,937	2	0	2	104
			T5VS	10,693	3	0	1	120	11,482	3	0	1	129	11,554	3	0	1	110
			T5S	10,771	3	0	1	121	11,566	3	0	1	130	11,639	3	0	1	111
			T5M	10,790	3	0	2	121	11,587	4	0	2	130	11,659	4	0	2	111
			T5W	10,632	3	0	2	119	11,417	4	0	2	128	11,488	4	0	2	109
	1000 mA	138 W	T1S	13,655	2	0	2	99	14,663	3	0	3	106	14,754	3	0	3	107
			T2S	14,079	2	0	2	102	15,118	3	0	3	110	15,212	3	0	3	110
			T2M	13,756	2	0	3	100	14,772	3	0	3	107	14,864	3	0	3	108
			T3S	13,739	2	0	2	100	14,754	2	0	2	107	14,846	3	0	3	108
			T3M	13,864	2	0	2	100	14,888	3	0	3	108	14,981	3	0	3	109
			T4M	14,052	2	0	2	102	15,090	3	0	3	109	15,184	3	0	3	110
			TFTM	13,842	2	0	3	100	14,864	2	0	3	108	14,957	2	0	3	108
			T5VS	14,623	3	0	1	106	15,703	4	0	1	114	15,801	4	0	1	115
			T5S	14,731	3	0	1	107	15,818	3	0	1	115	15,917	3	0	1	115
			T5M	14,757	4	0	2	107	15,846	4	0	2	115	15,945	4	0	2	116
			T5W	14,540	4	0	2	105	15,614	4	0	2	113	15,711	4	0	2	114
60C (60 LEDs)	700 mA	131 W	T1S	14,694	2	0	2	106	15,779	3	0	3	114	15,877	3	0	3	115
			T2S	15,150	3	0	3	110	16,269	3	0	3	118	16,370	3	0	3	119
			T2M	14,803	2	0	3	107	15,896	3	0	3	115	15,995	3	0	3	116
			T3S	14,785	2	0	2	107	15,877	3	0	3	115	15,976	3	0	3	116
			T3M	14,919	2	0	2	108	16,021	3	0	3	116	16,121	3	0	3	117
			T4M	15,122	2	0	2	110	16,238	3	0	3	118	16,340	3	0	3	118
			TFTM	14,896	2	0	3	108	15,996	2	0	3	116	16,096	2	0	3	117
			T5VS	15,736	3	0	1	114	16,898	4	0	1	122	17,004	4	0	1	123
			T5S	15,852	3	0	1	115	17,022	4	0	1	123	17,129	4	0	1	124
			T5M	15,880	4	0	2	115	17,052	4	0	2	124	17,159	4	0	2	124
			T5W	15,647	4	0	2	113	16,802	4	0	2	122	16,907	4	0	2	123
	1000 mA	209 W	T1S	20,095	3	0	3	96	21,579	3	0	3	103	21,714	3	0	3	104
			T2S	20,720	3	0	3	99	22,249	3	0	3	106	22,388	3	0	3	107
			T2M	20,245	3	0	3	97	21,740	3	0	3	104	21,876	3	0	3	105
			T3S	20,220	3	0	3	97	21,713	3	0	3	104	21,849	3	0	3	105
			T3M	20,404	3	0	3	98	21,910	3	0	4	105	22,047	3	0	4	105
			T4M	20,681	3	0	3	99	22,207	3	0	4	106	22,346	3	0	4	107
			TFTM	20,372	3	0	3	97	21,876	3	0	4	105	22,013	3	0	4	105
			T5VS	21,521	4	0	1	103	23,110	4	0	1	111	23,254	4	0	1	111
			T5S	21,679	4	0	1	104	23,280	4	0	1	111	23,425	4	0	1	112
			T5M	21,717	4	0	2	104	23,321	5	0	3	112	23,466	5	0	3	112
			T5W	21,399	4	0	3	102	22,979	5	0	3	110	23,122	5	0	3	111

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Electrical Load

Number of LEDs	Drive Current (mA)	System Watts	Current (A) 120	208	240	277	347	480
30	530	52	0.52	0.30	0.26	0.23	--	--
	700	68	0.68	0.39	0.34	0.30	0.24	0.17
	1000	105	1.03	0.59	0.51	0.45	0.36	0.26
40	530	68	0.67	0.39	0.34	0.29	0.23	0.17
	700	89	0.89	0.51	0.44	0.38	0.31	0.22
	1000	138	1.35	0.78	0.67	0.58	0.47	0.34
60	530	99	0.97	0.56	0.48	0.42	0.34	0.24
	700	131	1.29	0.74	0.65	0.56	0.45	0.32
	1000	209	1.98	1.14	0.99	0.86	0.69	0.50

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

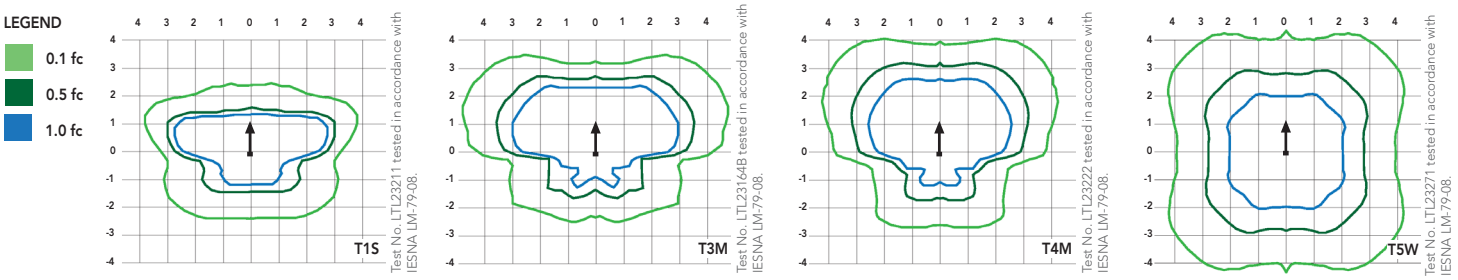
To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSX1 LED 60C 1000			
	1.0	0.98	0.96	0.91
	DSX1 LED 60C 700			
	1.0	0.99	0.99	0.99

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (20').



FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for area and street lighting applications.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Low EPA (0.9 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior lighting distribution, uniformity, and pole spacing. Light engines are available in 3000K (>80 CRI), 4000K (>70 CRI) or 5000K (67 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of 30, 40 or 60 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Four-bolt mast arm mount provides easy, secure installation for nominal 1-1/4" to 2"diameter arms (1-5/8" to 2-3/8" O.D.) and enables the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. Housing includes cast-in wildlife shield. Die-cast trigger latch on door provides tool-less entry for easy and secure opening with one hand; top-side leveling crosshairs and internal bubble level assist with installation.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated. Rated for -40°C minimum ambient. U.S. D663,462 S. International patents pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note:
Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Re: Responses to City Comments
Commercial Preliminary Development Plan, PL2017064
PEI # 170069

Analysis of Commercial Preliminary Development Plan:

Planning Review	Shannon McGuire	Planner	Corrections
	(816) 969-1603	Shannon.McGuire@cityofls.net	

1. Please label all gas and oil wells on the property. If none are present please cite source of information.
Response: We have not found any records indicating gas and oil wells on the property.

2. Label the right-of-way width of SE Blue Pkwy.
Response: Right of way width from centerline has been labeled on SE Blue Parkway. See Sheet C1 and C1A.

3. Please label the zoning districts of adjacent properties.
Response: Zoning districts of adjacent properties have been labeled. See Sheet C1 and C1A.

4. Please provide details showing that all lighting used to illuminate the site is arranged, located or screened so that light is directed away from and no light source is visible from a public street, a residentially zoned area or a residential use. Provide manufacturer specifications of all exterior light fixtures to review for compliance with Article 7, Division V of the UDO.
Response: See attached Sheet PH-1.0. Lighting locations and photometric levels are indicated. Manufacturer's Spec sheets have been included for reference and specific fixture is labeled on sheet.

5. Please provide a photometric plan showing the lighting levels throughout the site and at the property lines.
Response: See attached Sheet PH-1.0. Lighting locations and photometric levels are indicated.

6. Please label the width of the ADA aisle.
Response: the ADA aisle width has been labeled on Sheet C1.

7. Please relocate the ADA parking spaces so that they are at the nearest point to the front building entrance.
Response: The ADA stalls have been relocated to the nearest point to the front building entrance. See Sheet C1.

8. Please provide ADA parking sign details. Sign shall be mounted between 3' and 5' above grade, measured to the bottom of the sign.
Response: The ADA parking sign detail is provided on Sheet C8.

9. Please add total impervious coverage to the building & lot data table.
Response: The impervious coverage has been added to Sheet C1.

10. Please add the zoning district of the lot (CP-2) to the building & lot data table.
Response: The zoning district has been added to the building and lot data table on Sheet C1.

11. Please label sight triangles along SE Blue Pkwy.
Response: The sight triangles along SE Blue Parkway have been labeled on Sheet C1A.

12. Please provide trash dumpster screening details. The dumpster enclosure shall be constructed of masonry walls and solid steel gates painted to be compatible with the enclosure walls.
Response: See revised project elevation sheet indicating the size and construction as requested. trash enclosure is 100% masonry with solid steel gates painted to match trim as indicated.

13. Parking areas that are visible from the street shall have a landscaping strip of at least 20 feet wide from the right-of-way (ROW) line. The site plan shows a landscaping strip that is 18 feet wide at one end and 18.47 feet wide at the other. Please adjust the parking are so that there is a 20 foot landscaping strip between it and the ROW. Parking stall depth can be reduced to 17' when there is a minimum 6' sidewalk or open area at the head of the spaces.
Response: The setback has been revised to 20 feet by shifting the parking and building 2' north. See Sheet C1.

14. The elevations are lacking the required architectural elements. All sides of the building shall have four sided architecture and include similar architectural details, materials and colors to avoid a back side presentation to other buildings or residential neighborhoods. Horizontal and vertical elements shall extend completely around the building and utilize the same or similar materials on all building facades. Offsets, vertical/horizontal breaks shall be provided on all sides of buildings to provide architectural relief.
Response: See revised elevations and renderings. Each of the exit/egress doors has been offset by 16" from the primary building perimeter and highlighted with a masonry accent and canopy that is consistent with the architecture of the entry accent tower element. The accent masonry color has also been carried to all four elevations in areas that are not part of an entry – again in keeping with the architectural language of the primary front elevation. The architecture has chosen to highlight the vertical nature of the stucco composite panels while adding the horizontal datum features in the masonry areas only. The canopies are consistent in size and detail, and the windows have all been sized/aligned to create a consistent pattern that will allow natural light into the interior showroom and warehouse spaces.

15. The landscaping wall near the driveway is shown in a storm water easement. Structures shall not be built over easements. Please update the site plan accordingly.
Response: The landscape wall has been removed. A public area inlet has been added to the plans to connect the two public storm sewer structures. See Sheet C5A.

16. On the landscaping plan, the trash enclosure location is adjacent to the loading dock. This is inconsistent with all other sheets. Please advise if this is correct.
Response: The trash enclosure is to be adjacent to the loading dock. The plans have been updated to match.

17. The landscaping for the high impact screening is required to be planted on both sides of the fence. Staff does not have the authority to make deviations from the ordinance, if you wish to keep the fence on the property line with landscaping on one side you may ask for a modification from the Planning Commission/City Council by submitting a narrative statement that explains the need for modification.
Response: See attached request to code modification.

18. Please provide details for the high impact screening fence.
Response: See included detail on sheet C9.

19. Deciduous trees shall be a minimum of 3 inch caliper measured at a point 6 inches above the ground or top of the root ball, at planting and evergreen trees shall be a minimum height of 8 feet at planting. The plant schedule shows the Bald Cypress is only 2" caliper and the Canaerti Juniper is only 6' tall. Please adjust this to meet minimum requirements.
Response: The plant schedule has been updated accordingly.

20. In the letter justifying the alternative parking plan please include the total sq. ft. of the buildings at other locations being compared to ensure they are commensurate.
Response: See attached letter provided by the owner

21. Dash in RTU locations on all elevations to verify that parapet screening requirements are met.
Response: See revised elevations. The RTU's are located behind the two primary elevation entry towers.

22. Is any monument sign proposed? If so, show the location and provide sign details.
Response: None Proposed.

Engineering Review	Gene Williams (816) 969-1812	Senior Staff Engineer Gene.Williams@cityofls.net	Corrections

1. The "Final Stormwater Management Plan" dated Mar. 16, 2017 does not appear to comply with the Kansas City APWA Section 5600 requirements. The City of Lee's Summit has adopted the Comprehensive Control Strategy for detention basin design, and includes a "flat" release rate per acre for the 2, 10, and 100 year events.
Response: See revised stormwater management plan. The basin size has been increased to meet the "flat" release rates per APWA 5600.

2. The "Final Stormwater Management Plan" dated Mar. 16, 2017 should be re-titled to "Preliminary Stormwater Detention Report" or equivalent. This is a Preliminary Development Plan, and a final report will be required during the Final Development Plan review process.
Response: The stormwater report title has been revised accordingly.

3. Sheet C1: Site Key Note F should refer to KCMMB mix for the commercial entrance with a minimum of 8" thickness.
Response: Site Key Note F has been revised accordingly.

4. Sheet C2: A retaining wall is shown over the of a public stormwater pipe and easement. This is a non-allowed use in accordance with the encroachment policy. It appears this area will need to be filled-in, and the stormwater pipe should be connected from the City-owned stormwater system, to the system owned and maintained by MoDOT. As such, a permit from MoDOT would be required prior to approval of the Final Development Plan.
Response: Acknowledged. The landscape wall has been removed. A public area inlet has been added to the plans to connect the two public storm sewer structures. See Sheet C5A.

5. Sheet C2: Please label the detention basin as "Detention Basin and Water Quality Basin".
Response: Detention basin label has been revised on Sheet C2.

6. Sheet C3: The water meter is shown in an inaccessible area (i.e., Water Utilities personnel would not be able to easily access this meter for reading purposes). Please move the meter toward the new commercial entrance, and ensure it is within the limits of the public easement. If no public easement is available, a new water line easement for the water meter would be required by separate document.
Response: The water meter has been relocated on Sheet C3.

7. Sheet C3: It appears a portion of the public water main is outside the limits of the existing waterline easement. A separately-recorded waterline easement appears warranted for the portion of the waterline that is outside the limits of the existing easement, and the new water meter to be installed as per the

comment above. The dedication of this separate easement will be required prior to approval of the Final Development Plan.
Response: We agree to provide a 10' utility easement along the south property line, adjacent to the road right of way.

8. The new fire hydrant(s) required by the Fire Department may be connected to the private fire line and will be considered "private" fire hydrant(s).
Response: Acknowledged. See Sheet C3 for proposed private fire hydrant location.

9. Sheet C5: Detailed design comments shall be provided during the Final Development Plan process, including the requirement for the location of the hydraulic grade line for the design storm within the pipe and structures, details, etc.
Response: Acknowledged.

10. Sheet C8: Pavement design for "Car Parking Areas" does not meet the requirements of the Unified Development Ordinance (UDO) Article 12 "Parking" in terms of pavement thickness. At this point, however, it may be better to remove this detail since this is a Preliminary Development Plan rather than a Final Development Plan. Specific design comments shall be forthcoming during the Final Development Plan process for sheets such as C8, and others.
Response: Acknowledged. Detail has been removed for.

11. Landscape Plan: It appears there are at least two (2) trees too close to the water main near the new commercial entrance. The minimum distance between a tree and a water line is five (5) feet, as measured from the mature tree trunk to the outside of the pipe.
Response: Trees have been relocated away from the water line.

Fire Review	Jim Eden (816) 969-1303	Assistant Chief Jim.Eden@cityofls.net	Corrections

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2012 International Fire Code.
Response: Acknowledged. Compliance with the 2012 International Fire Code will be adhered to.

2. IFC 507.5.1- Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 300 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.
Response: Acknowledged. A private fire hydrant has been added to Sheet C3.

Action required: Provide a hydrant to meet the 300 foot requirement and provide an accessible hydrant for the FDC.
Response: Acknowledged. A private fire hydrant has been added to Sheet C3.

Traffic Review	Michael Park City (816) 969-1820	Traffic Engineer Michael.Park@citlyofls.net	Corrections

1. We did not know at the pre-application meeting the size of building proposed; the 25K sq.ft does meet our requirements for traffic study in the Access Management Code (AMC). We can discuss the scope of study with the applicant considering the location, type and size of development proposed. Hopefully, it will not require significant analysis. Our Code requires a traffic study if the development may generate more than 100 peak trips in an hour based on ITE industry accepted standards of trip generation estimation.
Response: Traffic study provided.