MAYOR SYLVESTER TURNER DISTRICT COUNCIL MEMBERS

AMY PECK
TARSHA JACKSON
ABBIE KAMIN
CAROLYN EVANS-SHABAZZ
DAVID MARTIN
TIFFANY D. THOMAS
MARY NAN HUFFMAN
KARLA CISNEROS
ROBERT GALLEGOS
EDWARD POLLARD
MARTHA CASTEX-TATUM



CONTROLLER CHRIS B. BROWN COUNCIL MEMBERS AT-LARGE

> MIKE KNOX DAVID ROBINSON MICHAEL KUBOSH LETITIA PLUMMER SALLIE ALCORN

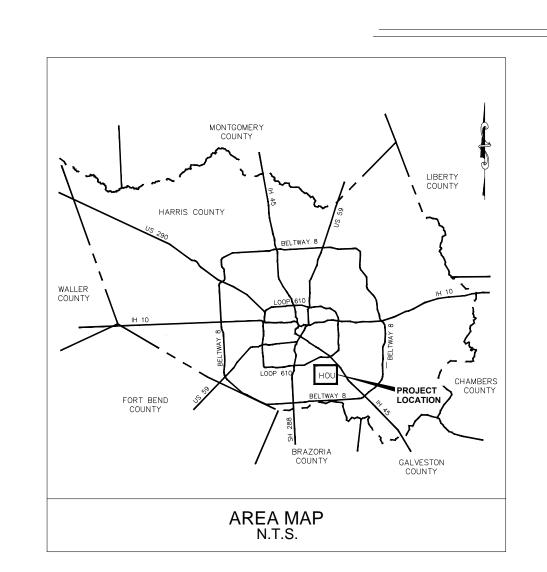
ISSUED FOR BID

OF

PASSENGER LOADING BRIDGE REPLACEMENT

AT THE

WILLIAM P. HOBBY AIRPORT (HOU)



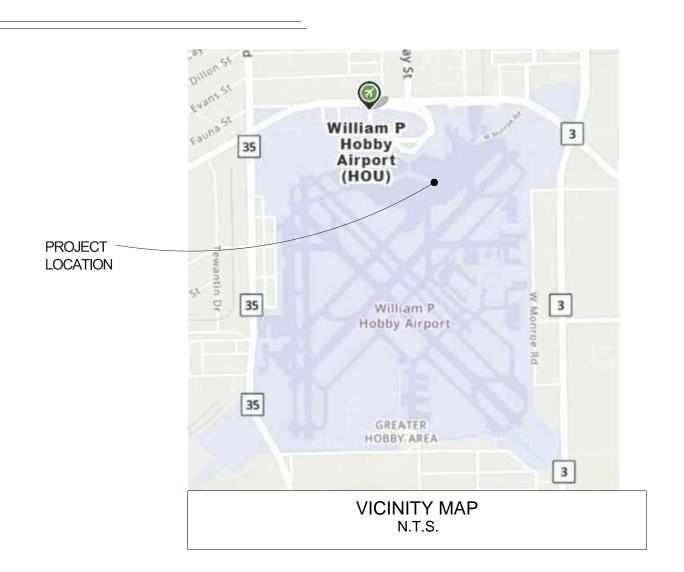
PROJECT NO. PN946B

PREPARED BY =====

JACOBS ENGINEERING GROUP INC.

4B TECHNOLOGY GROUP

APRIL 04, 2022 ISSUED FOR BID



HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT

Jacobs Engineering Group Inc. 5985 ROGERDALE ROAD

OBS ENGINEERING GROUP INC. 5985 ROGERDALE ROAD HOUSTON, TEXAS 77072 +1-281-721-8400 WWW.JACOBS.COM TEXAS P.E. FIRM F-2966

REVISIONS

NO. DESCRIPTION DATE BY

1 ISSUED FOR BID 04-04-2022 JLW

JBBY AIRPORT (HOU)
NG BRIDGE REPLACEMENT

PROJECT MGR: JLW
DESIGNER: RC
DRAWN BY: RC
CHECKED BY: DJ
SCALE: AS SHOWN
DATE: APRIL 04, 2022



APPROVED BY: DA

DIRECTOR HOUSTON AIRPORT SYSTEM

_HOUSTON AIRPORT SYST

WHXK7119
I.P. NO:

H.A.S. NO:

G-0.00

		SHEET INDEX
DRAWING NO.	SHEET NO.	SHEET NAME
1	G-0.00	COVER SHEET
2	G-1.01	DRAWING INDEX AND BUILDING CODES
3	G-1.02	GENERAL NOTES, ABBREVIATIONS, AND LEGEND
4	G-2.01	SITE PLAN AND ENLARGED WORK AREA
5	G-3.01	OVERALL CONSTRUCTION STAGING, ACCESS AND HAUL ROUTE
6	G-3.02	MAXIMUM EQUIPMENT HEIGHT RESTRICTION PLAN
7	G-4.01	CONSTRUCTION PHASING PLAN, PLAN 1 - GATE 28
8	G-4.02	CONSTRUCTION PHASING PLAN, PLAN 1 - GATE 30
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10	G-4.04	CONSTRUCTION PHASING PLAN, PLAN 1 - GATE 31
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12	AD-1.01	ARCHITECTURAL DEMOLITION SITE PLAN AND ELEVATIONS
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15	MEPD-2.01	MECHANICAL, ELECTRICAL , AND PLUMBING DEMOLITION PLAN
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18	MEP-5.01	ELECTRICAL DETAILS
19	MEP-7.01	ELECTRICAL ONE-LINE DIAGRAM
20	MEP-8.01	ELECTRICAL PANEL SCHEDULES
21	TN-0.00	TELECOMMUNICATIONS SYMBOLS AND ABBREVIATIONS (1 OF 4)
22	TN-1.00	TELECOMMUNICATIONS APRON LEVEL (2 OF 4)
23	TN-4.00	TELECOMMUNICATIONS DETAILS (3 OF 4)
24	TD-1.00	TELECOMMUNICATIONS DEMO (4 OF 4)

JURISDICTION AND CODE SUMMARY

JURISDICTION: HOUSTON AIRPORT SYSTEM AND CITY OF HOUSTON
APPLICABLE CODES:
2012 INTERNATIONAL BUILDING CODE
2012 INTERNATIONAL FIRE CODE
2012 UNIFORM MECHANICAL CODE
2012 UNIFORM PLUMBING CODE
2020 NATIONAL ELECTRICAL CODE (STATE MANDATED)
2015 INTERNATIONAL ENERGY CONSERVATION CODE, OR ASHRAE 90.1-2013

FAA AC: 150/5300-13A - AIRPORT DESIGN 150/5370-2G - OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION 150/5370-10H - STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS

HOUSTON AIRPORT SYSTEM STANDARDS / CODE SUMMARY

HAS DESIGN CRITERIA MANUAL - APRIL 2015
HAS CAD/GEOSPATIAL DATA STANDARDS & PROCEDURES MANUAL DECEMBER 2013 (REL. 3.3)
HAS BIM STANDARDS - JULY 2017
IAH TERMINAL REDEVELOPMENT PROGRAM DESIGN MANUAL - JUNE 2018 (VER. 1)

FAA AC: 150/5300-13A - AIRPORT DESIGN 150/5370-2G - OPERATIONAL SAFETY ON AU

150/5370-2G - OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION 150/5370-10H - STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS

EQUIPMENT	GATE 28	GATE 29	GATE 30	GATE 31	GATE 32	TOTAL QUANTITY
PASSENGER	A3-58/116 or TB	A3-61/127	A3-61/127	A3-61/127	A3-65/133 or TB	Е
LOADING BRIDGE	35.0/17.5-3	or TB 39.0/19.0-3	or TB 39.0/19.0-3	or TB 39.0/19.0-3	43.0/20.5-3	J
PLB COOLING UNIT	TRANE 5 TON RTU	5				
GROUND POWER	ITW GSE	Е				
UNIT	2400 POWER COIL	5				
PRE-CONDITIONED	ITW GSE	Е				
AIR UNIT	3400 ADF-130/2X (H)	5				
POTABLE WATER CABINETS	REUSE EXISTING	0				
FIXED WALKWAY	REUSE EXISTING	REUSE EXISTING		REUSE EXISTING	REUSE EXISTING	0

PROVIDE ALL EQUIPMENT LISTED ABOVE OR EQUALS.



HOUSTON TEXAS

Jacobs Engineering Group Inc. 5985 ROGERDALE ROAD HOUSTON, TEXAS 77072 +1-281-721-8400

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NO. DESCRIPTION DATE BY

1 ISSUED FOR BID 04-04-2022 JLW

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WILLIAM P. HOBBY AIRPORT (HOU) PASSENGER LOADING BRIDGE REPLACEMENT

PROJECT MGR: JLW
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DRAWN BY: RC
CHECKED BY: DJ
SCALE: AS SHOWN
DATE: APRIL 04, 2022



APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

JACOBS PROJECT NO:
WHXK7119

A C. NO.

C.I.P. NO:

SHEET NO:

H.A.S. NO: PN946B

G-1.01

- THE TERMS "CONSTRUCTION CONTRACTOR," "GENERAL CONTRACTOR" AND "CONTRACTOR" SHALL BE UNDERSTOOD TO BE THE SAME UNLESS SPECIFICALLY NOTED OTHERWISE.
- WHERE THE TERM "OR EQUAL" IS USED IN SPECIFICATIONS IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE SUBJECT TO THE RULING AND JUDGMENT OF THE ENGINEER AND SHALL BE SUBMITTED TO THE ENGINEERING TEAM FOR REVIEW AND APPROVAL. ACTUAL SAMPLES OF THE SUBSTITUTIONS SHALL ALSO BE SUBMITTED TO THE ENGINEER FOR REVIEW
- ALL WORK FOR THIS PROJECT SHALL CONFORM TO STANDARDS PUBLISHED BY RECOGNIZED PROFESSIONAL AND INDUSTRY ORGANIZATIONS.
- DRAWINGS ARE NOT TO BE SCALED UNLESS PERMITTED BY THE ENGINEER. DIMENSIONS SHALL GOVERN.
- ALL DRAWINGS AND CONSTRUCTION NOTES ARE COMPLEMENTARY AND WHAT IS CALLED FOR BY ONE WILL BE AS BINDING AS IF CALLED FOR BY ALL.
- NO SUBSTITUTIONS OF SPECIFIED MATERIAL SHALL BE MADE WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER AND OWNER. THE ENGINEER AND OWNER WILL CONSIDER MATERIAL CHANGE REQUESTS ON AN INDIVIDUAL BASIS. CONTRACTOR SHALL SUBMIT SAMPLES AND CUT SHEETS FOR WRITTEN APPROVAL BY THE ENGINEERING TEAM PRIOR TO THE PROCUREMENT OF ANY SUCH MATERIAL.
- ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED, CONDITIONED, AND COMMISSIONED AS DIRECTED BY THE MANUFACTURERS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- DISCREPANCIES:
- a. SHOULD A DISCREPANCY OR CONFLICT BE DISCOVERED IN THE CONTRACT DOCUMENTS THE MORE STRICT REQUIREMENTS SHALL APPLY.
- D. THE CONTRACTOR SHALL HAVE ALL ITEMS OR DETAILS CLARIFIED WITH THE ENGINEER AND OWNER PRIOR TO SUBMITTING A BID, OTHERWISE THE ENGINEER'S AND OWNER'S INTERPRETATION SHALL BE FINAL.
- c. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER AT ONCE BEFORE PROCEEDING.
- EQUIPMENT OF OTHERS AND AREAS ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED AND RESTORED IF DAMAGED IN THE COURSE OF CONSTRUCTION, TO THE SATISFACTION OF THE OWNER.
-). CONTRACTOR SHALL PREPARE AND MAINTAIN ALL CONSTRUCTION AREAS, AS WELL AS SURROUNDING AREAS FREE OF DEBRIS OR HAZARDOUS EQUIPMENT
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL DEBRIS AND CONSTRUCTION MATERIAL FROM THE SITE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROPERLY CLEANING ALL AREAS PRIOR TO FINAL ACCEPTANCE BY THE OWNER INCLUDING BUT NOT LIMITED TO HAUL ROUTES, ACCESS GATES. APRON PAVEMENTS, PLUMBING AND STORM DRAINS, PASSENGER LOADING BRIDGES, EXTERIOR AND INTERIOR BUILDING AREAS, MECHANICAL, ELECTRICAL AND IT ROOMS, ETC.
- 2. THE GENERAL CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DUST FROM RISING.
- CONTRACTOR SHALL REVIEW, LOCATE AND PHOTOGRAPH EXISTING UTILITIES MECHANICAL AND ELECTRICAL FACILITIES WITH THE AIRPORT MAINTENANCE STAFF PRIOR TO BEGINNING WORK. PHOTOGRAPHS SHALL BE APPROPRIATELY LABELED AND PROVIDED TO THE CONSTRUCTION MANAGER.
- . THE CONTRACTOR IS TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION, IF A CONFLICT EXISTS BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT EXISTS IN THE FIELD, CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.
- 5. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNEXPECTED OR UNKNOWN FIELD CONDITIONS, ERRORS, OMISSIONS, OR DISCREPANCIES IN THE DRAWINGS, SPECIFICATIONS, OR CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH THE WORK OR SHOP
- 16. CONTRACTOR SHALL NOTIFY ENGINEER FOR CLARIFICATION PRIOR TO BIDDING OF ANY DISCREPANCIES IN THESE DRAWINGS. BID SHALL BE BASEL ON THE MOST STRINGENT REQUIREMENT.
- THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND FACILITIES (I.E., AIRPORT LIGHTING, NAVAIDS, ETC.) FROM DAMAGE BY EQUIPMENT OR PERSONNEL. THE CONTRACTOR SHALL CONTACT ALL UTILITY AND FACILITY AGENCIES FOR FIELD MARKING PRIOR TO BEGINNING CONSTRUCTION.
- B. ANY DAMAGE TO EXISTING STRUCTURE TO REMAIN DURING THE CONSTRUCTION OR CLEAN-UP OF THE NEW WORK SHALL BE REPAIRED TO EQUIVALENT OR BETTER THAN ORIGINAL CONDITION AT CONTRACTOR'S
- 9. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. ALL UTILITIES AND FACILITIES ARE NOT NECESSARILY SHOWN. THE CONTRACTOR SHALL ADVISE THE ENGINEER, IN WRITING, OF ANY EXISTING DAMAGED UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
-). THE CONTRACTOR SHALL HAND DIG WHEN WITHIN THREE (3) FEET OF ANY KNOWN OR SUSPECTED UNDERGROUND UTILITY.
- 1. CONTRACTOR SHALL VERIFY THE INVERT, AND/OR FLOW LINE ELEVATIONS OF POINTS OF CONNECTIONS PRIOR TO THE COMMENCEMENT OF WORK.
- 22. THE CONTRACTOR PERFORMING THE WORK SHALL UNCOVER (WHEN AND WHERE POSSIBLE) EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF ANY CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT. SIGNIFICANT DESIGN AND/OR LOCATION CHANGES MAY REQUIRE REVISION OF THESE PLANS BY THE ENGINEER
- 3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT UNDERGROUND UTILITIES ALONG THE AREA OF EXCAVATION.
- 4. ANY DAMAGE TO ANY OF THE EXISTING PAVEMENT AND/OR UTILITIES MUST BE REPAIRED IMMEDIATELY. THE CONTRACTOR MUST NOTIFY THE APPROPRIATE UTILITY OWNER, WHO WILL MAKE THE REPAIRS AT THE CONTRACTORS
- 25. CONTRACTOR TO PROVIDE A SAFETY PLAN COMPLIANCE DOCUMENT PRIOR TO START OF CONSTRUCTION TO CLEARLY DELINEATE AREAS FOR CONSTRUCTION, SAFETY BARRIERS, EGRESS, EXITS, CONSTRUCTION TRAFFIC DURING THE VARIOUS PHASES AND WHEN CONDITIONS CHANGE IN ACCORDANCE WITH THE APPROVED FAA 7460 AND HOU OPERATIONAL REQUIREMENTS. GENERAL CONTRACTOR SHALL COMPLY WITH CURRENT VERSION OF THE HAS AND FAA STANDARDS. PERMITS SHALL BE POSTED IN A VISIBLE PLACE AT ALL TIMES.
- 6. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING AND BE FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING THE WORK.
- . THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO MAINTAIN HARMONY AMONG ALL TRADES AND AVOID ANY LABOR DISPUTE THAT MAY CAUSE A DELAY IN COMPLETING THE WORK. ANY DAMAGES TO THE OWNER'S PROPERTY OR TO THE WORK RESULTING FROM LABOR DISPUTE, SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

GENERAL NOTES (continued)

- 28. CONTRACTOR SHALL NOTIFY ENGINEER FOR CLARIFICATION PRIOR TO BIDDING OF ANY DISCREPANCIES IN THESE CIVIL AND ELECTRICAL DRAWINGS. BID SHALL BE BASED ON THE MOST STRINGENT REQUIREMENT.
- 29. CONTRACTOR TO OBTAIN WRITTEN APPROVAL FROM OWNER AND ENGINEER PER A WORK CHANGE DIRECTIVE (WCD) OR CHANGE ORDER PRIOR TO ANY CHANGES OR DEVIATION FROM THE CONTRACT DOCUMENTS.
- O. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ALL PROPOSALS FOR ADDITIONAL WORK TO THE OWNER FOR REVIEW AND APPROVAL. NO WORK IS TO PROCEED VIA A WORK CHANGE DIRECTIVE (WCD) OR CHANGE ORDER UNTIL AN AUTHORIZATION TO PROCEED, SIGNED BY THE ENGINEER & OWNER'S REPRESENTATIVE IS RETURNED TO THE GENERAL CONTRACTOR.
- . THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE REQUIRED TO ATTEND PROJECT MEETINGS AT THE PROJECT SITE WHEN REQUIRED BY THE ENGINEER AND OWNER'S REPRESENTATIVE. OWNER WILL PREPARE MEETING AGENDA AND MINUTES.
- . ALL WORK, MATERIALS AND EQUIPMENT SPECIFIED IN THIS PROJECT SHALL BE NEW AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
- 3. GENERAL CONTRACTOR SHALL PROVIDE ALL THE REQUIRED DOCUMENTS AND CERTIFICATES OF INSPECTION AND SHALL PERFORM ALL THE CONTROLLED INSPECTIONS REQUIRED BY THE HAS, FAA AND OTHER GOVERNING ENTITIES.
- 34. ARRANGE FOR, PROVIDE AND MAINTAIN TEMPORARY FACILITIES AND CONTROLS AS REQUIRED FOR THE PROPER AND EXPEDITIOUS EXECUTION OF
- 35. THE PLANS WERE DEVELOPED FROM "AS-BUILT" INFORMATION. THE INFORMATION REPRESENTED IS BASED ON THE DESIGNERS' BEST KNOWLEDGE OF THE EXISTING CONDITIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW THESE DRAWINGS WITH THE CITY ENGINEER. HAS AND/OR FAA PRIOR TO BEGINNING ANY WORK AT THE AIRPORT. SHOULD THE CONTRACTOR DISCOVER CONDITIONS DIFFERING FROM OR NOT REFLECTED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT OWNER/ENGINEER.
- 36. CONSTRUCTION PERSONNEL SHALL BE CONFINED TO THE LIMITS OF THE CONSTRUCTION AREA. ALL OSHA REGULATIONS FOR CONSTRUCTION AREAS SHALL BE STRICTLY FOLLOWED.
- 37. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED DEVELOPMENT AND CONSTRUCTION PERMITS, LOCAL, STATE OR FEDERAL, PRIOR TO THE START OF ANY WORK.
- 38. PROJECT PAY ITEMS THE PROJECT PAY ITEMS PROVIDED SHALL BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN ON THE PLANS. WORK SHOWN ON THE PLANS, BUT NOT ASSOCIATED WITH A SPECIFIC PAY ITEM SHALL BE CONSIDERED AS INCIDENTAL TO THE OTHER PAY ITEMS OF WORK
- 39. AREAS OF STOCKPILED MATERIAL WITHIN THE CONSTRUCTION AREA SHALL BE TREATED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150-5370-2G. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEANUP OF ANY DEBRIS FALLING ON AIRPORT PAVEMENT AS A RESULT OF THE WORK. CONTRACTOR SHALL SWEEP ALL ROADWAYS ALONG THE HAUL ROUTES AT LEAST DAILY. AIRPORT PAVEMENTS, INCLUDING THOSE USED AS PART OF THE HAUL ROUTE SHALL BE IMMEDIATELY CLEANED OF ANY FALLEN DEBRIS OR MUD RESULTING FROM CONSTRUCTION ACTIVITIES.
- 40. THE WASTE AREA FOR ALL CLEAN SELECT MATERIAL IS TO BE PLACED AT THE CONTRACTOR'S STAGING AREA. ALL BROKEN CONCRETE, ASPHALT, ETC. SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- 41. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS TO THE HAUL ROAD AS ORDERED BY THE HAS PROJECT MANAGER. ALL REPAIR AND RESTORATION WORK FOR THE HAUL ROUTES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 42. THE OWNER RESERVES THE RIGHT TO CONTRACT AND PERFORM OTHER OF ADDITIONAL WORK ADJACENT TO AND WITHIN THE WORK AREA COVERED BY THIS CONTRACT. WHEN SEPARATE CONTRACTS ARE LET WITHIN THE LIMITS OF ANY ONE PROJECT, EACH CONTRACTOR SHALL CONDUCT HIS WORK SO AS NOT TO INTERFERE WITH OR HINDER THE PROGRESS OR THE COMPLETION OF THE WORK BEING COMPLETED BY OTHER CONTRACTORS. THE CONTRACTORS WORKING ON THE SAME PROJECT SHALL COOPERATE WITH EACH OTHER AS ORDERED BY THE OWNER. ANY ADDITIONAL EFFORT OR WORK REQUIRED FOR SUCH COORDINATION WITH OTHER CONTRACTORS SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE
- 43. ALL CONTRACTOR PERSONNEL SHALL ARRIVE AT THE PROJECT IN COMPANY VEHICLES. ONLY AUTHORIZED VEHICLES WILL BE ALLOWED INSIDE THE SECURITY FENCE. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL POSITION ALL EQUIPMENT, TOOLS, MATERIAL, ETC. IN THE APPROVED CONTRACTOR'S STAGING AREA UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE OWNER.
- 44. CONTRACTOR SHALL COMPLY WITH ALL LOCAL. STATE AND FEDERAL AIR QUALITY AND POLLUTION CONTROL REGULATIONS WHICH PERTAIN TO THE CONSTRUCTION ACTIVITIES AND/ OR PLANT OPERATIONS.
- 45. THE CONTRACTOR SHALL FIELD VERIFY ALL BENCHMARKS AND FLEVATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. IF NO VERIFICATION IS MADE. CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR SURVEY INFORMATION.
- 46. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT (800) 245-4545/611 A MINIMUM OF 48 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
- 47. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE LATEST EDITION OF THE O.S.H.A. REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.
- 48. THE CONTRACTOR PERFORMING THE WORK SHALL BE LIABLE FOR ALL LEGAL ACTIONS RESULTING FROM THE CONSTRUCTION ACTIVITY IN THE VICINITY OF THIS PROJECT AND BY ACCEPTING THESE PLANS, AGREES TO HOLD THE OWNER, ARCHITECT, AND ENGINEER HARMLESS FROM ANY CLAIMS OR DAMAGES RESULTING FROM THIS WORK.
- 49. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING OF ALL MATERIALS. THE LOADING AND UNLOADING OF ALL PASSENGER LOADING BRIDGES (PLB). GROUND POWER UNITS (GPU). PRE-CONDITIONED AIR UNITS (PCA) AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED PRACTICES AND SHALL BE AT ALL TIMES PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE SYSTEMS AND MATERIAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXAMINE SUCH MATERIAL AT THE POINT OF DELIVERY AND TO REJECT ALL DEFECTIVE MATERIAL. THE DEFECTIVE MATERIAL MUST BE REPLACED WITH SOUND
- 50. ACCESS TO ALL EXISTING AIRFIELD PAVEMENTS AND SERVICE ROADS SHALL BE MAINTAINED AT ALL TIMES.
- 51. SURFACE RESTORATION: AT THE END OF ALL CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES TO BE MADE EQUAL TO OR BETTER THAN EXISTING SITE CONDITION PRIOR TO CONSTRUCTION. THROUGHOUT CONSTRUCTION OF THIS PROJECT, SHALL BE AS GOOD OR BETTER THAN EXISTING CONDITION PRIOR TO STARTING WORK BY CONTRACTOR. ANY DEBRIS ON THE SURROUNDING PAVEMENT NETWORK ORIGINATING FROM THE CONSTRUCTION SITE SHALL BE REMOVED IMMEDIATELY.
- 52. CONTRACTOR SHALL PREPARE A SET OF "AS-BUILT" DRAWINGS SHOWING ANY FIELD CHANGES MADE TO THE APPROVED ENGINEERING PLANS AND SUBMIT TO THE DESIGN CONSULTANT FOR SUBMISSION TO OWNER.
- 53. IF THE CONSTRUCTION DOES NOT BEGIN WITHIN A YEAR AFTER THE PLANS HAVE BEEN APPROVED BY GOVERNING AGENCIES, NEW APPROVALS MUST BE OBTAINED AND LETTERS OF AVAILABILITY MUST BE UPDATED.
- 54. THE CONTRACTOR IS ADVISED THAT AIRCRAFT MAINTENANCE OPERATIONS ARE CONDUCTED ADJACENT TO THE PROJECT. SPECIAL ATTENTION TO DUST CONTROL WILL BE REQUIRED DURING THE COURSE OF THE PROJECT. THE

GENERAL NOTES (continued)

- USE OF WATER AND CALCIUM CHLORIDE SHALL BE ANTICIPATED. THE ENGINEER OR THE OWNER RESERVES THE RIGHT TO HALT WORK OR HAULING IN NON-CONFORMING AREAS, IF CORRECTIVE ACTIONS ARE NOT PROMPTLY TAKEN BY THE CONTRACTOR TO CONTROL DUST.
- 55. THE CONTRACTOR SHALL KEEP AIRFIELD AREAS, WHICH ARE SUBJECT TO CONSTRUCTION TRAFFIC. CLEAN OF ALL DEBRIS AND DIRT WITH A VACUUM TRUCK. FOD AND DEBRIS DEPOSITED ON THE AIRFIELD PAVEMENTS AS A RESULT OF CONSTRUCTION SHALL BE IMMEDIATELY VACUUMED CLEAN. THE CONSTRUCTOR SHALL HAVE ON HAND, AT ALL TIMES, A BACK-UP VACUUM TRUCK FOR USE WHEN DEEMED NECESSARY BY THE CONSTRUCTION
- MANAGER, HAS AND/OR FAA. A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION OR BORINGS, THE CONTRACTOR SHALL CONTACT TEXAS ONE CALL (811) TO VERIFY ALL

UNDERGROUND CABLE LOCATIONS IN THE VICINITY OF THE PROPOSED WORK: CABLE OWNER CONTACT PERSON PHONE NUMBER

FEDERAL AVIATION ADMINISTRATION RON ADAIR (713) 847-1430 (O) (337) 254-1336 (M) HOUSTON AIRPORT SYSTEM (HAS) JUAN PEDRACOVA (281) 230-8915 (C) (281) 299-6409 (M)

HOU AIRPORT OPERATIONS CENTER DUTY PHONE

(713) 845-6555

GRAPHIC SYMBOLS

←○→	CAMK	(CABLE MARKER)		EBOX (ELECTRIC BOX)	
Ø	СО	(CLEANOUT)		ELMH (ELEC. M.H.)	
÷	CONC	(CONCRETE)	•	WTRV (WATER VALVE)	

CONC (CONCRETE)

SECURITY AND SAFETY NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL AIRPORT AND FAA ADVISORY CIRCULAR OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION REQUIREMENTS AS DESCRIBED IN FAA ADVISORY CIRCULAR 150/5370-2G. THE CONTRACTOR SHALL OBTAIN SECURITY BADGES FOR SUPERVISORS, SUBCONTRACTOR SUPERVISORS AND DESIGNATED ESCORTS WITHIN THE CONSTRUCTION AREA, AS A MINIMUM. NO SEPARATE PAYMENT SHALL BE MADE FOR AIRPORT SECURITY BADGES AND
- THE CONTRACTOR SHALL MARK AND LIGHT AREAS UNDER CONSTRUCTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. AIRCRAFT AND PUBLIC SAFETY SHALL NOT BE COMPROMISED AND PROPER SEPARATION SHALL BE MAINTAINED AT ALL TIMES. EQUIPMENT AND VEHICLES SHALL BE MARKED WITH 3' X 3' ORANGE AND WHITE CHECKER FLAGS AND YELLOW FLASHING DOME TYPE LIGHT.
- CONSTRUCTION LIMITS ALL CONTRACT VEHICLES AND CONSTRUCTION TRAFFIC IS REQUIRED BY FAA ADVISORY CIRCULARS TO STAY WITHIN THE LIMITS OF CONSTRUCTION WHILE ON THE CONSTRUCTION SITE. LIMITS SHALL BE STRICTLY MAINTAINED. ACCESS ROUTES TO THE CONSTRUCTION SITE ARE SHOWN ON THE PLANS. TRAFFIC ASSOCIATED WITH CONSTRUCTION SHALL USE ONLY THOSE AREAS SHOWN FOR CONSTRUCTION USE. FAILURE TO DO SO COULD RESULT IN OFFENDERS' REMOVAL FROM THE SITE AND BADGE REVOCATION.
- CONTRACTOR'S ACCESS TO THE SITE IS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED PERSONNEL OR TRAFFIC ON THE CONSTRUCTION SITE.
- AOA GATES WHICH REMAIN OPEN FOR CONSTRUCTION TRAFFIC MUST BE MANNED BY A CERTIFIED GATE GUARD - AS A MINIMUM.
- NO DEBRIS OF ANY NATURE SHALL BE ALLOWED IN ACTIVE AIRCRAFT OPERATIONS AREAS. ALL LOOSE MATERIALS (DIRT, STONE, PAVEMENT, FORMING, ETC.) MUST BE KEPT WITHIN THE LIMITS OF CONSTRUCTION. WHEN THE CONSTRUCTION BARRIERS ARE MOVED DURING CONSTRUCTION, THE CLEANUP OF THE AREAS OUTSIDE THE BARRIERS SHALL OCCUR IMMEDIATELY. IN ADDITION, NO LOOSE MATERIALS THAT COULD BLOW INTO AIRCRAFT OPERATIONS AREAS SHALL BE ALLOWED IN THE CONSTRUCTION AREA.
- PRIOR TO ENTERING ANY AIR OPERATIONS AREA (AOA), SAFETY OR OBJECT FREE AREA, THE CONTRACTOR SHALL OBTAIN CLEARANCE WITH AIRPORT OPERATIONS. TWO-WAY RADIO COMMUNICATIONS WITH THE TOWER BY THE CONTRACTOR IS NOT ALLOWED. NO EQUIPMENT OR PERSONNEL SHALL ENTER AN OPEN RUNWAY OR TAXIWAY SAFETY OR OBJECT FREE AREA UNLESS PROPERLY COORDINATED WITH THE HOUSTON AIRPORT OPERATIONS. THE USE OF TRAINED FLAGMEN AND TWO-WAY RADIOS SHALL BE REQUIRED IN THESE AREAS. THE CONTRACTOR SHALL MONITOR THE COMMON TRAFFIC ADVISORY FREQUENCY PER AIRPORT OPERATIONS. THE CONTRACTOR SHALL HAVE AN ADEQUATE NUMBER OF TWO-WAY RADIOS ON-SITE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR PROVIDING THE RADIOS TO FLAGGERS. REFERENCE IS DIRECTED TO THE FAA ADVISORY CIRCULAR 150/5370-2G OF THE SPECIFICATIONS.
- UPON NOTIFICATION FROM AIRPORT OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE RUNWAY AND/OR TAXIWAY OF EQUIPMENT AND PERSONNEL IN THE EVENT OF A DECLARED AIRCRAFT EMERGENCY OR UNSAFE CONDITIONS.
- ALL BARRICADES SHALL BE SECURED IN PLACE AGAINST MOVEMENT BY WIND OR JET BLAST, IN A MANNER APPROVED BY THE CONSTRUCTION MANAGER AND AIRPORT OPERATIONS.
- 10. ALL BARRICADE LIGHTS SHALL BE INSPECTED AND VERIFIED FOR PROPER OPERATION AT THE END OF EACH DAY BEFORE CONTRACTOR CEASES WORK, BUT NO LATER THAN SIXTY (60) MINUTES PRIOR TO SUNDOWN. INSPECTION SHALL BE PERFORMED BY THE CONTRACTOR AND WILL BE VERIFIED BY AIRPORT OPERATIONS. ALL LIGHTS SHALL BE OPERATING BEFORE CONTRACTOR LEAVES THE SITE.

ABBREVIATIONS ABBREVIATIONS (continued)

GENERAL

ELEV = ELEVATION TYP = TYPICAL NTS = NOT TO SCALE STA = STATION RT = RIGHT LT = LEFT SHT = SHEET ST = STREET AVE = AVENUE = DEPARTMENT DEPT TYP = TYPICAL NIC = NOT IN CONTRACT = NORTHING = EASTING

CURVES

R, RAD = RADIUS = DIAMETER DIA, Ø ID = INSIDE DIAMETER OD = OUTSIDE DIAMETER

LINES

= CENTER LINE = BASE LINE = FLOW LINE

PIPES

FAA

HH

CP = CONCRETE PIPE = PERFORATED METAL PIPE PMP RCP = REINFORCED CONCRETE PIPE SWR = SANITARY SEWER

= STORM SEWER WTR = WATERLINE

SYMBOLS NG = NATURAL GROUND

BLDG = BUILDING PP = POWER POLE IR = IRON ROD MH = MANHOLE **PVMT** = PAVEMENT

CONC = CONCRETE PCC = PORTLAND CEMENT CONCRETE

ASPH = ASPHALT **RWY** = RUNWAY TWY = TAXIWAY

REINF = REINFORCED EG = EXISTING GRADE

= GEORGE BUSH INTERCONTINENTAL AIRPORT = HOUSTON AIRPORT SYSTEM COH DOA = CITY OF HOUSTON DEPARTMENT

OF AVIATION = FEDERAL AVIATION ADMINISTRATION ASTM = AMERICAN SOCIETY FOR TESTING MATERIALS

= TEXAS DEPARTMENT OF TRANSPORTATION OSHA = OCCUPATIONAL SAFELY AND HEALTH ADMINISTRATION

= AMERICAN ASSOCIATION OF COST **ENGINEERS**

= AMERICAN ASSOCIATION OF STATE **HIGHWAY & TRANSPORTATION** OFFICIALS = ADVISORY CIRCULAR

= AIRCRAFT CLASSIFICATION NUMBER ACN = AIRPLANE DESIGN GROUP ADG = ABOVE GROUND LEVEL AGL AIP = AIRPORT IMPROVEMENT PLAN

= AIRPORT LAYOUT PLAN ALS = APPROACH LIGHT SYSTEM AOA = AIRPORT OPERATIONS AREA = AIRPORT PAVEMENT MANAGEMENT SYSTEM APMS

ARFF = AIRPORT RESCUE AND FIREFIGHTING ATC = AIR TRAFFIC CONTROL ATCT = AIR TRAFFIC CONTROL TOWER = BEST MANAGEMENT PRACTICES CATEX = CATEGORICAL EXCLUSION

CBR = CALIFORNIA BEARING RATIO CCR = CONSTANT CURRENT REGULATOR CFR = CODE OF FEDERAL REGULATIONS CSPP = CONSTRUCTION SAFETY PHASING PLAN

GPU = GROUND POWER UNIT HAS = HOUSTON AIRPORT SYSTEM DOT = DEPARTMENT OF TRANSPORTATION EΑ = ENVIRONMENTAL ASSESSMENT EΒ = ENGINEERING BRIEF

EIS = ENVIRONMENTAL IMPACT SYSTEM EPA = ENVIRONMENTAL PROTECTION AGENCY FAARFIELD = FAA RIGID AND FLEXIBLE ITERATIVE ELASTIC LAYER DESIGN

= FEDERAL AVIATION REGULATION FBO = FIXED BASE OPERATOR FOD = FOREIGN OBJECT DAMAGE (OR DEBRIS) FWD = FALLING WEIGHT DEFLECTOMETER GPS = GLOBAL POSITIONING SYSTEM

HMA = HOT MIX ASPHALT HIRL = HIGH-INTENSITY RUNWAY LIGHTING ILS = INSTRUMENT LANDING SYSTEM LAHSO = LAND AND HOLD SHORT OPERATIONS

INDICATOR LIGHTS

= HANDHOLE

LOC = LOCALIZER MALSR = MEDIUM-INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT

= MEDIUM-INTENSITY RUNWAY LIGHTING = MEDIUM-INTENSITY TAXIWAY LIGHTING

MILS = MICROWAVE LANDING SYSTEM MSL = MEAN SEA LEVEL NAS = NATIONAL AIRSPACE SYSTEM NAVAID = NAVIGATIONAL AID

NDT = NON-DESTRUCTIVE TESTING NEPA = NATIONAL ENVIRONMENTAL POLICY ACT NOTAM = NOTICE TO AIRMEN **NPDES** = NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NOI = NOTICE OF INTENT NTP = NOTICE TO PROCEED NTSB = NATIONAL TRANSPORTATION SAFETY BOARD

O&M = OPERATIONS AND MAINTENANCE PAPI = PRECISION APPROACH PATH INDICATOR PCA = PRE CONDITIONED AIR PCC = PORTLAND CEMENT CONCRETE

PCI = PAVEMENT CONDITION INDEX PCN = PAVEMENT CLASSIFICATION NUMBER = POINTS OF INTERSECTION PLB = PASSENGER LOADING BRIDGE PLS = PROFESSIONAL LAND SURVEYOR

REIL = RUNWAY END IDENTIFIER LIGHTS RGL = RUNWAY GUARD LIGHTS RPZ = RUNWAY PROTECTION ZONE RSA = RUNWAY SAFETY AREA RT = REMOTE TRANSMITTER

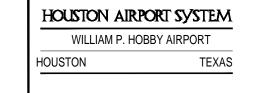
SWPPF

HCFCD = HARRIS COUNTY FLOOD CONTROL DISTRICT SOW = SCOPE OF WORK = SAFETY PLAN COMPLIANCE DOCUMENT SPCD SPT = STANDARD PENETRATION TEST **TCEQ** = TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

= TERMINAL INSTRUMENT PROCEDURES

= STORM WATER POLLUTION PREVENTION PLAN

= TERMINAL RADAR APPROACH CONTROL TSA = TAXIWAY SAFETY AREA TOFA = TAXIWAY OBJECT FREE AREA VFR = VISUAL FLIGHT RULES





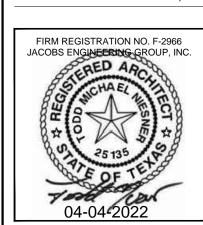
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REVISIONS NO. DESCRIPTION DATE BY

ISSUED FOR BID 04-04-2022 JLW

HOU) PORT SE REI Ŋ RD $\mathbf{\Omega}$ DING Ш (7)

PROJECT MGR: DESIGNER: RC RC DRAWN BY: CHECKED BY: AS SHOWN SCALE: DATE: APRIL 04, 2022



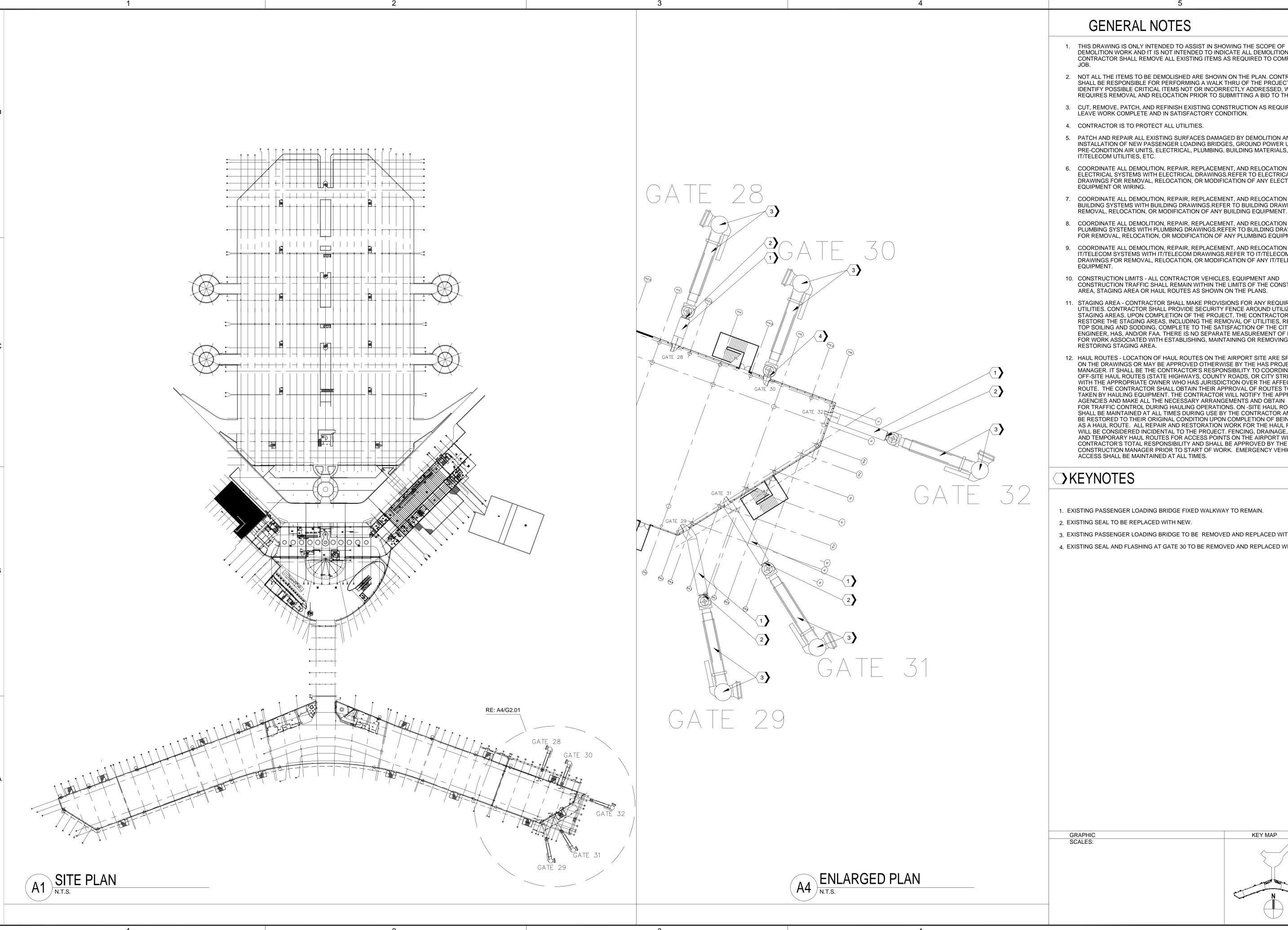
APPROVED BY: HOUSTON AIRPORT SYSTEM

WHXK7119 C.I.P. NO:

JACOBS PROJECT NO:

PN946B SHEET NO:

H.A.S. NO:



- 1. THIS DRAWING IS ONLY INTENDED TO ASSIST IN SHOWING THE SCOPE OF DEMOLITION WORK AND IT IS NOT INTENDED TO INDICATE ALL DEMOLITION. CONTRACTOR SHALL REMOVE ALL EXISTING ITEMS AS REQUIRED TO COMPLETE THE
- 2. NOT ALL THE ITEMS TO BE DEMOLISHED ARE SHOWN ON THE PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING A WALK THRU OF THE PROJECT, TO IDENTIFY POSSIBLE CRITICAL ITEMS NOT OR INCORRECTLY ADDRESSED, WHICH REQUIRES REMOVAL AND RELOCATION PRIOR TO SUBMITTING A BID TO THE OWNER.
- 3. CUT, REMOVE, PATCH, AND REFINISH EXISTING CONSTRUCTION AS REQUIRED.
- 4. CONTRACTOR IS TO PROTECT ALL UTILITIES.
- 5. PATCH AND REPAIR ALL EXISTING SURFACES DAMAGED BY DEMOLITION AND / OR INSTALLATION OF NEW PASSENGER LOADING BRIDGES, GROUND POWER UNITS, PRE-CONDITION AIR UNITS, ELECTRICAL, PLUMBING, BUILDING MATERIALS, IT/TELECOM UTILITIES, ETC.
- 6. COORDINATE ALL DEMOLITION, REPAIR, REPLACEMENT, AND RELOCATION OF ELECTRICAL SYSTEMS WITH ELECTRICAL DRAWINGS.REFER TO ELECTRICAL DRAWINGS FOR REMOVAL, RELOCATION, OR MODIFICATION OF ANY ELECTRICAL
- 7. COORDINATE ALL DEMOLITION, REPAIR, REPLACEMENT, AND RELOCATION OF BUILDING SYSTEMS WITH BUILDING DRAWINGS.REFER TO BUILDING DRAWINGS FOR
- 8. COORDINATE ALL DEMOLITION, REPAIR, REPLACEMENT, AND RELOCATION OF PLUMBING SYSTEMS WITH PLUMBING DRAWINGS.REFER TO BUILDING DRAWINGS FOR REMOVAL, RELOCATION, OR MODIFICATION OF ANY PLUMBING EQUIPMENT.
- COORDINATE ALL DEMOLITION, REPAIR, REPLACEMENT, AND RELOCATION OF IT/TELECOM SYSTEMS WITH IT/TELECOM DRAWINGS.REFER TO IT/TELECOM DRAWINGS FOR REMOVAL, RELOCATION, OR MODIFICATION OF ANY IT/TELECOM
- 10. CONSTRUCTION LIMITS ALL CONTRACTOR VEHICLES, EQUIPMENT AND CONSTRUCTION TRAFFIC SHALL REMAIN WITHIN THE LIMITS OF THE CONSTRUCTION AREA, STAGING AREA OR HAUL ROUTES AS SHOWN ON THE PLANS.
- 11. STAGING AREA CONTRACTOR SHALL MAKE PROVISIONS FOR ANY REQUIRED UTILITIES. CONTRACTOR SHALL PROVIDE SECURITY FENCE AROUND UTILIZED STAGING AREAS. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE THE STAGING AREAS, INCLUDING THE REMOVAL OF UTILITIES, REGRADING, TOP SOILING AND SODDING, COMPLETE TO THE SATISFACTION OF THE CITY ENGINEER, HAS, AND/OR FAA. THERE IS NO SEPARATE MEASUREMENT OF PAYMENT FOR WORK ASSOCIATED WITH ESTABLISHING, MAINTAINING OR REMOVING AND
- 12. HAUL ROUTES LOCATION OF HAUL ROUTES ON THE AIRPORT SITE ARE SPECIFIED ON THE DRAWINGS OR MAY BE APPROVED OTHERWISE BY THE HAS PROJECT MANAGER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. THE CONTRACTOR SHALL OBTAIN THEIR APPROVAL OF ROUTES TO BE TAKEN BY HAULING EQUIPMENT. THE CONTRACTOR WILL NOTIFY THE APPROPRIAT AGENCIES AND MAKE ALL THE NECESSARY ARRANGEMENTS AND OBTAIN PERMITS FOR TRAFFIC CONTROL DURING HAULING OPERATIONS. ON -SITE HAUL ROUTES SHALL BE MAINTAINED AT ALL TIMES DURING USE BY THE CONTRACTOR AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. ALL REPAIR AND RESTORATION WORK FOR THE HAUL ROUTES WILL BE CONSIDERED INCIDENTAL TO THE PROJECT. FENCING, DRAINAGE, GRADING AND TEMPORARY HAUL ROUTES FOR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO START OF WORK. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES.

>KEYNOTES

- 1. EXISTING PASSENGER LOADING BRIDGE FIXED WALKWAY TO REMAIN.
- 2. EXISTING SEAL TO BE REPLACED WITH NEW.
- 3. EXISTING PASSENGER LOADING BRIDGE TO BE REMOVED AND REPLACED WITH NEW.
- 4. EXISTING SEAL AND FLASHING AT GATE 30 TO BE REMOVED AND REPLACED WITH NEW

WILLIAM P. HOBBY AIRPORT

HOUSTON

HOUSTON AIRPORT SYSTEM

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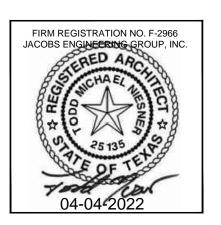
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REVISIONS

NO. DESCRIPTION DATE BY 1 ISSUED FOR BID 04-04-2022 JLW

· (HOU) PLACEME 3BY AIRPORT (3 BRIDGE REF HOBI ER ENG

PROJECT MGR: DESIGNER: RC CHECKED BY: AS SHOWN APRIL 04, 2022



APPROVED BY:

DIRECTOR HOUSTON AIRPORT SYSTEM

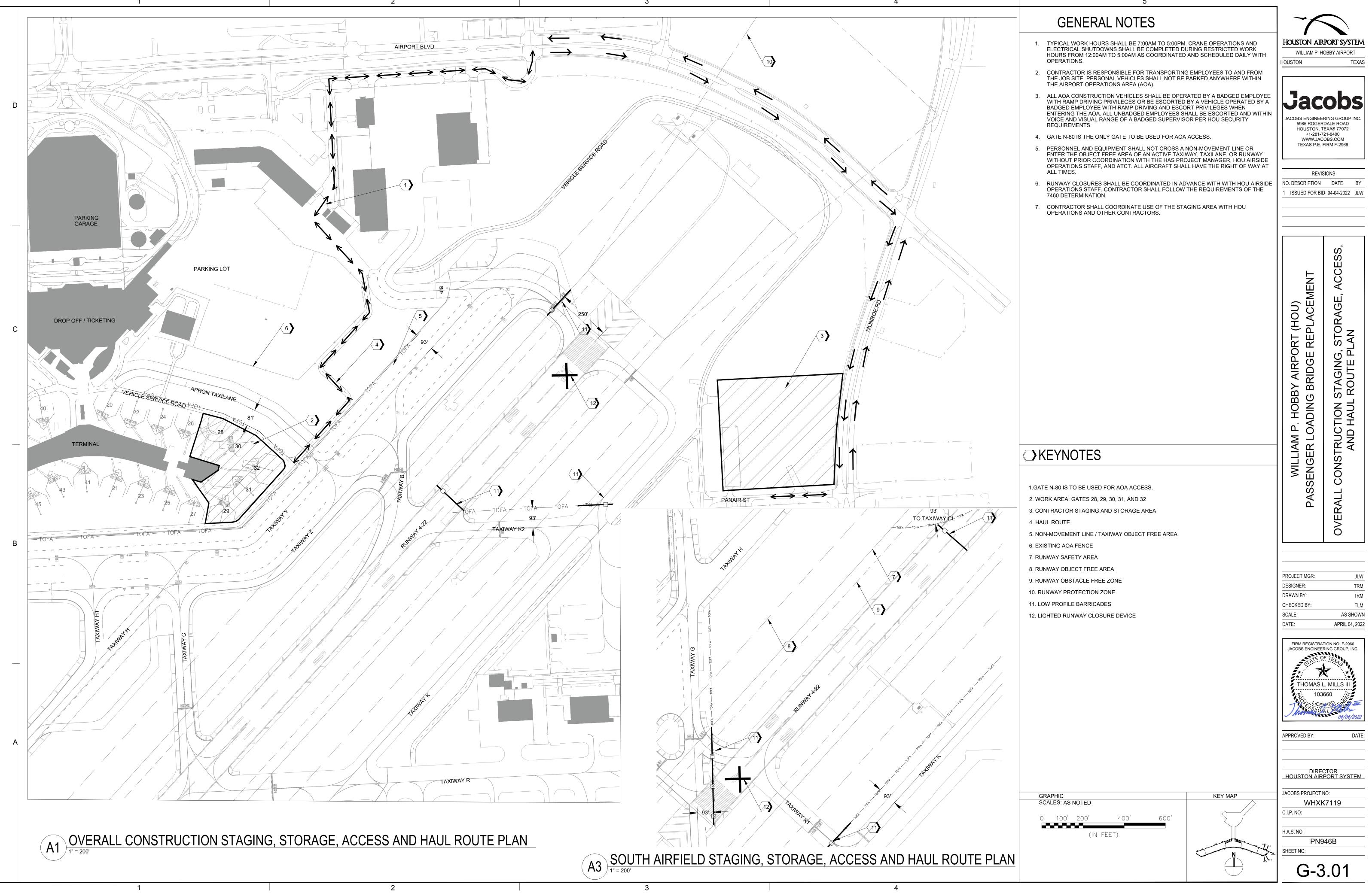
JACOBS PROJECT NO: WHXK7119

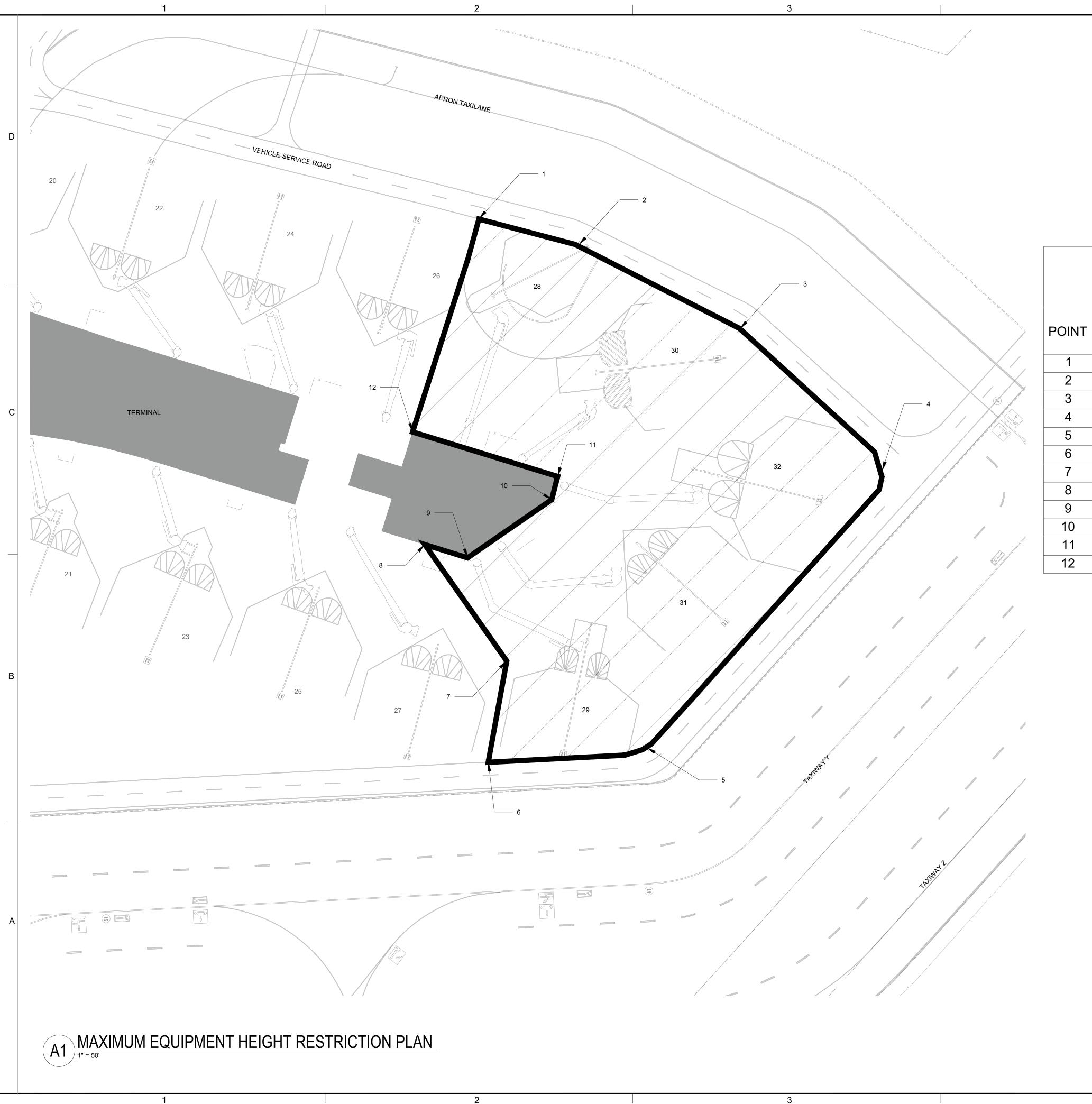
KEY MAP

C.I.P. NO: H.A.S. NO:

PN946B

G-2.01





CONSTRUCTION NOTES:

- 1. SEE TABLE THIS SHEET FOR HEIGHT RESTRICTION POINTS AND COORDINATES.
- 2. THE MAXIMUM EQUIPMENT HEIGHT IN THE STAGING AREA AND ALONG THE HAUL ROUTE IS 20'. TEMPORARY STOCKPILES ARE NOT ALLOWED UNLESS APPROVED IN WRITING FROM THE CONSTRUCTION MANAGER AND AIRPORT OPERATIONS.
- 3. RUNWAY 4-22 SHALL BE CLOSED WHEN EQUIPMENT EXCEEDS THE MAXIMUM ALLOWANCE HEIGHT RESTRICTIONS PER THE 7460 DETERMINATION. RUNWAY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH WITH HOU AIRSIDE OPERATIONS STAFF. CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE 7460 DETERMINATION.

HEIGHT RESTRICTION POINT TABLE

POINT	NORTHING	EASTING	GROUND ELEVATION	AIRSPACE SURFACE ELEVATION	MAXIMUM EQUIPMENT HEIGHT
1	13805716.09	3151881.191	42	136	94
2	13805690.78	3151976.735	42	123	81
3	13805607.7	3152138.717	41	98	57
4	13805461.14	3152278.084	40	68	28
5	13805195.3	3152045.526	40	68	28
6	13805180.95	3151890.352	40	83	43
7	13805280.82	3151908.59	41	91	50
8	13805395.51	3151827.851	42	110	68
9	13805382.39	3151870.009	41	105	64
10	13805439.69	3151952.845	41	101	60
11	13805462.53	3151958.739	42	103	61
12	13805506.37	3151815.879	43	122	79

GRAPHIC
SCALES: AS NOTED

0 25' 50' 100' 150'

(IN FEET)



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1 ISSUED FOR BID 04-04-2022 JLW

WILLIAM F. HOBBI AIRFORT (HOU)
ASSENGER LOADING BRIDGE REPLACEMENT

PROJECT MGR:	JLW
DESIGNER:	TRM
DRAWN BY:	TRM
CHECKED BY:	TLM
SCALE:	AS SHOWN
DATE:	APRIL 04, 2022



APPROVED BY: DA

DIRECTOR HOUSTON AIRPORT SYSTEM

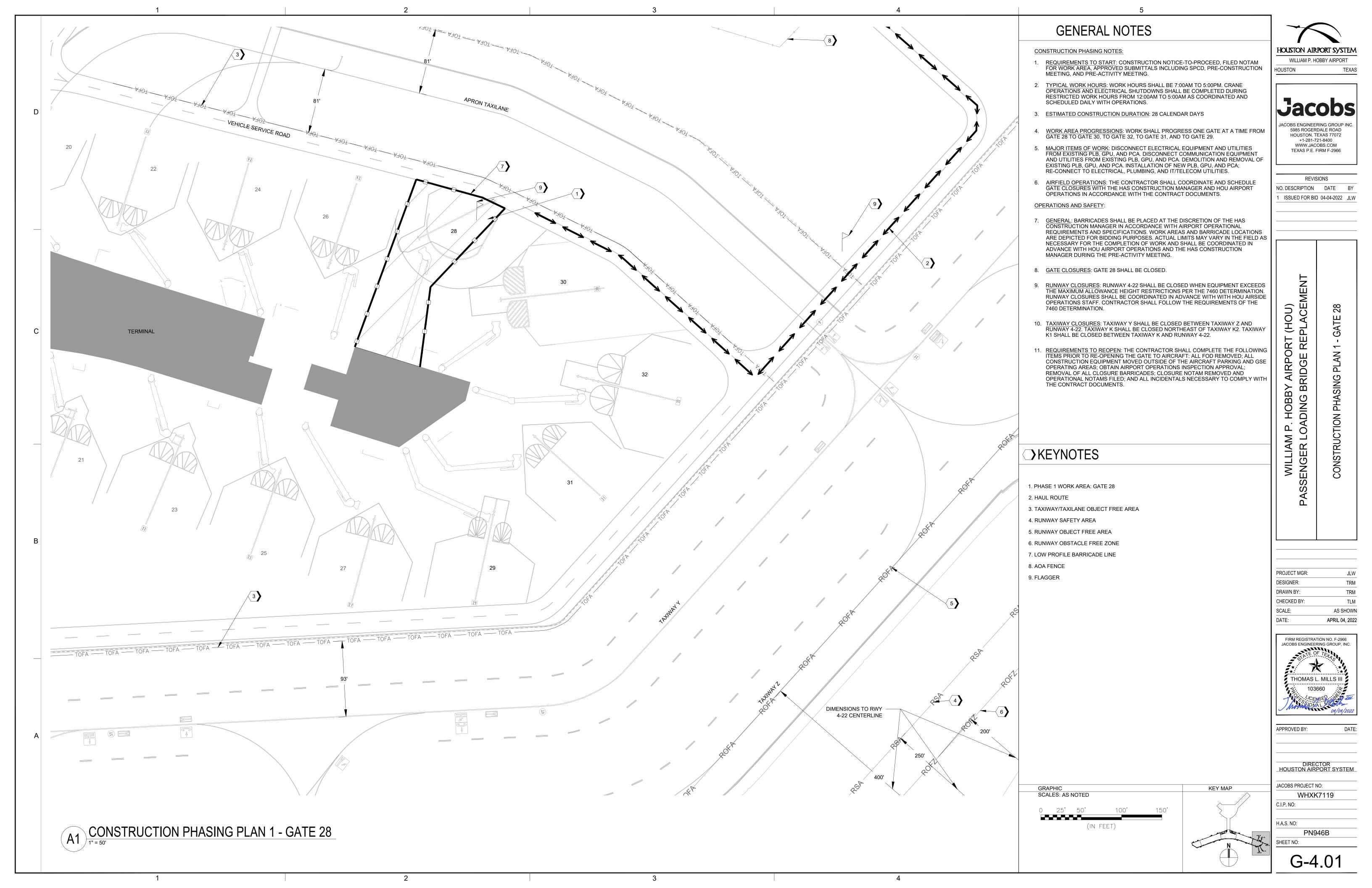
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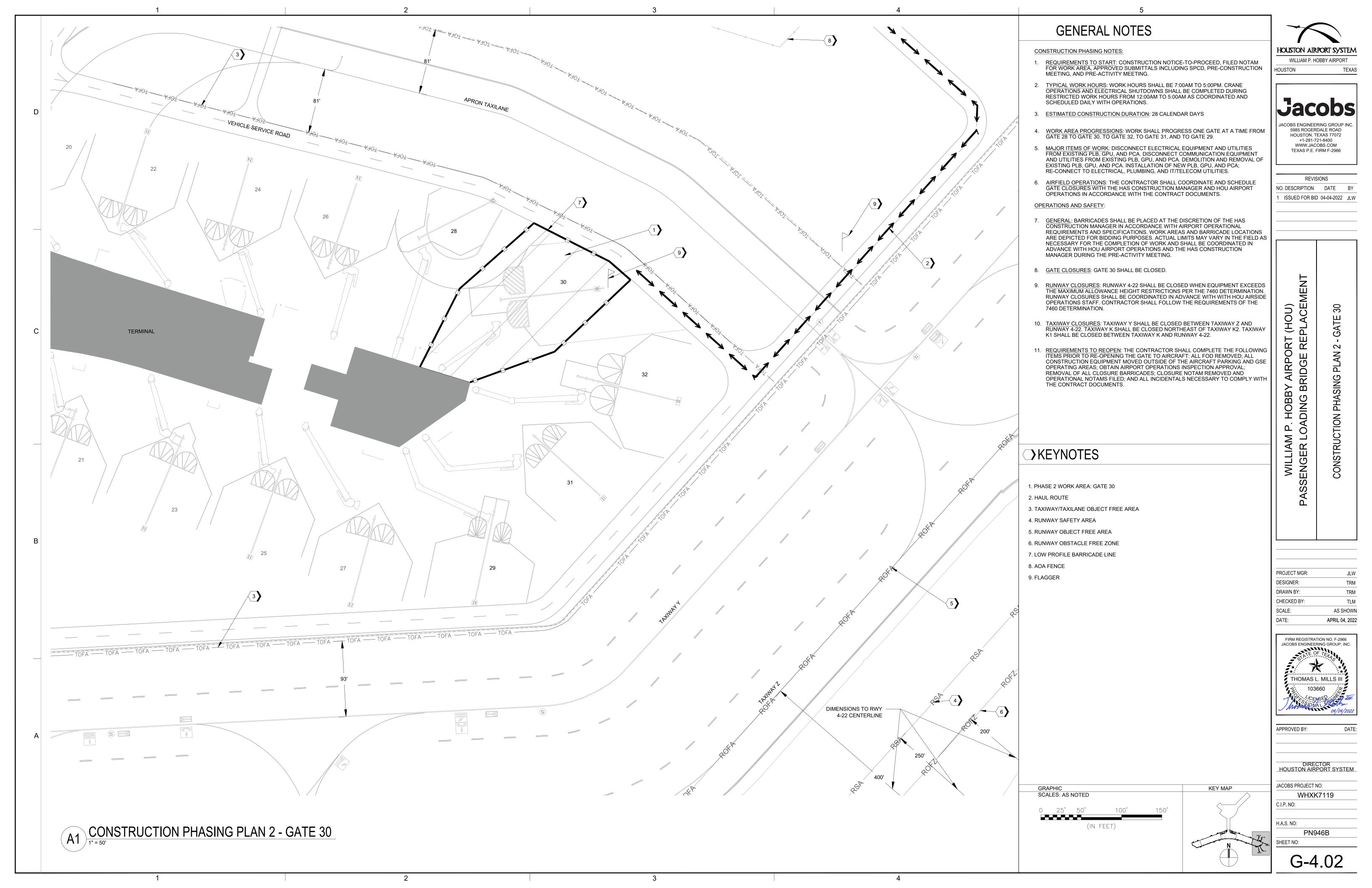
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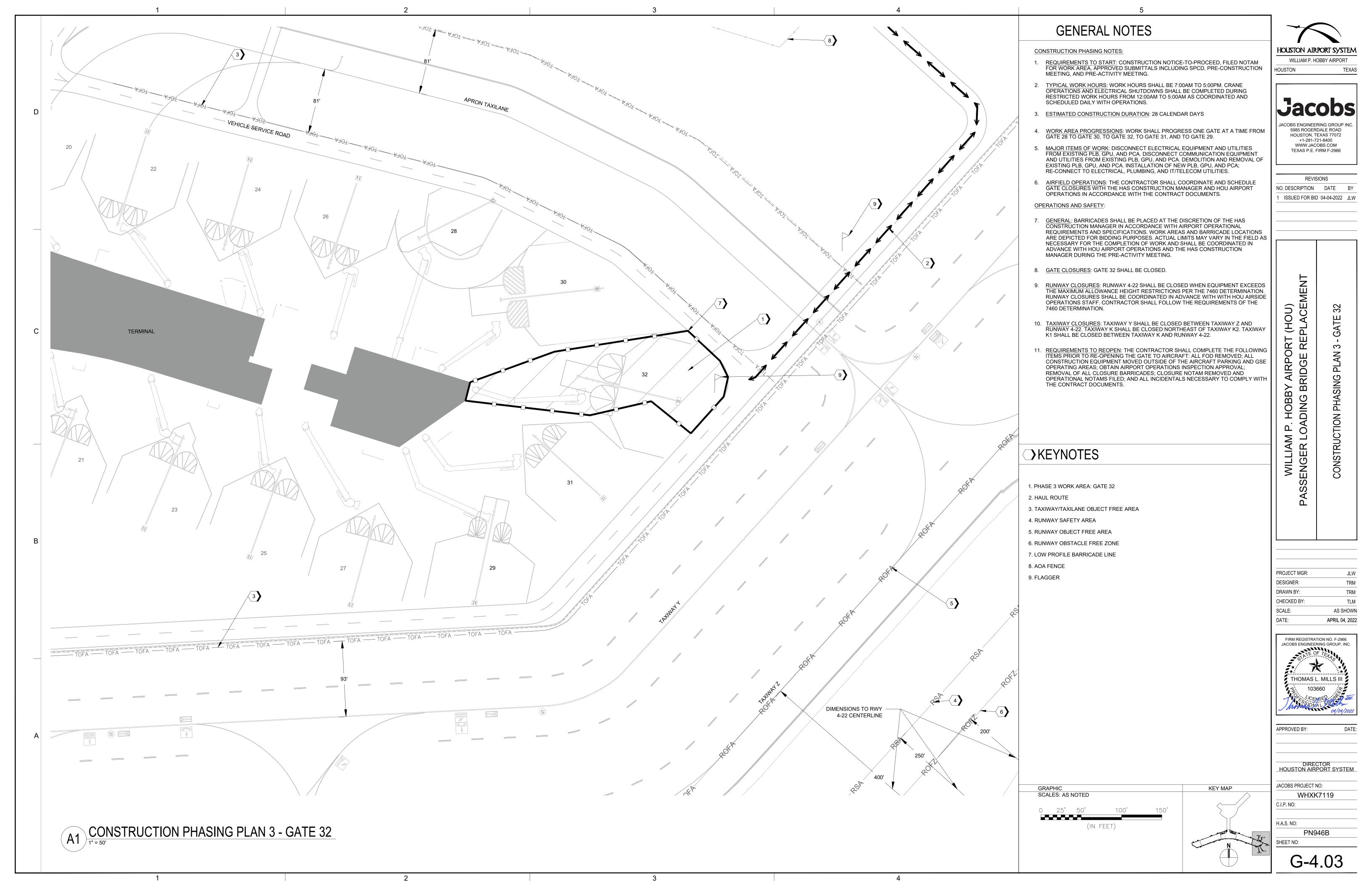
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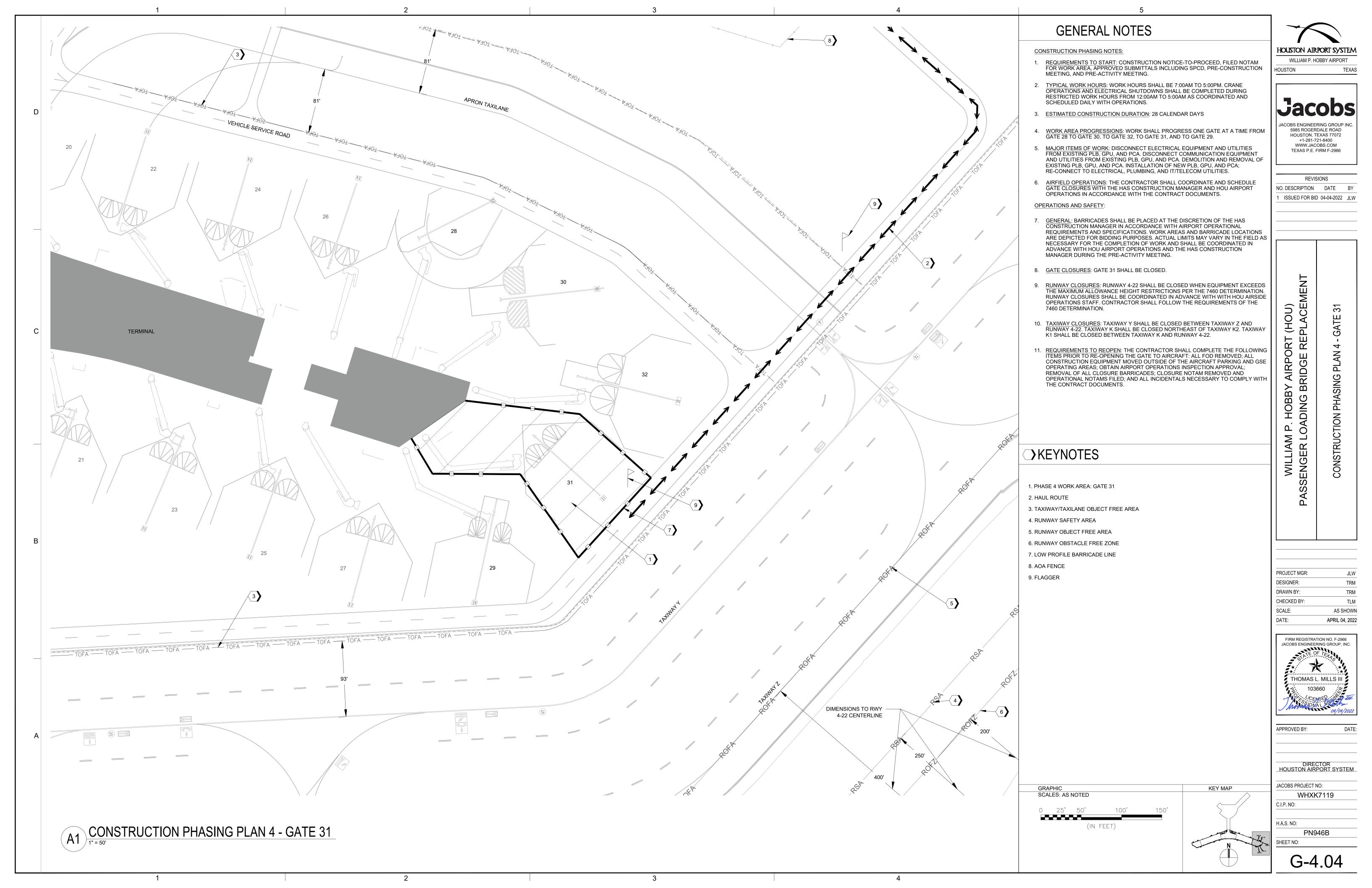
PN946B
SHEET NO:

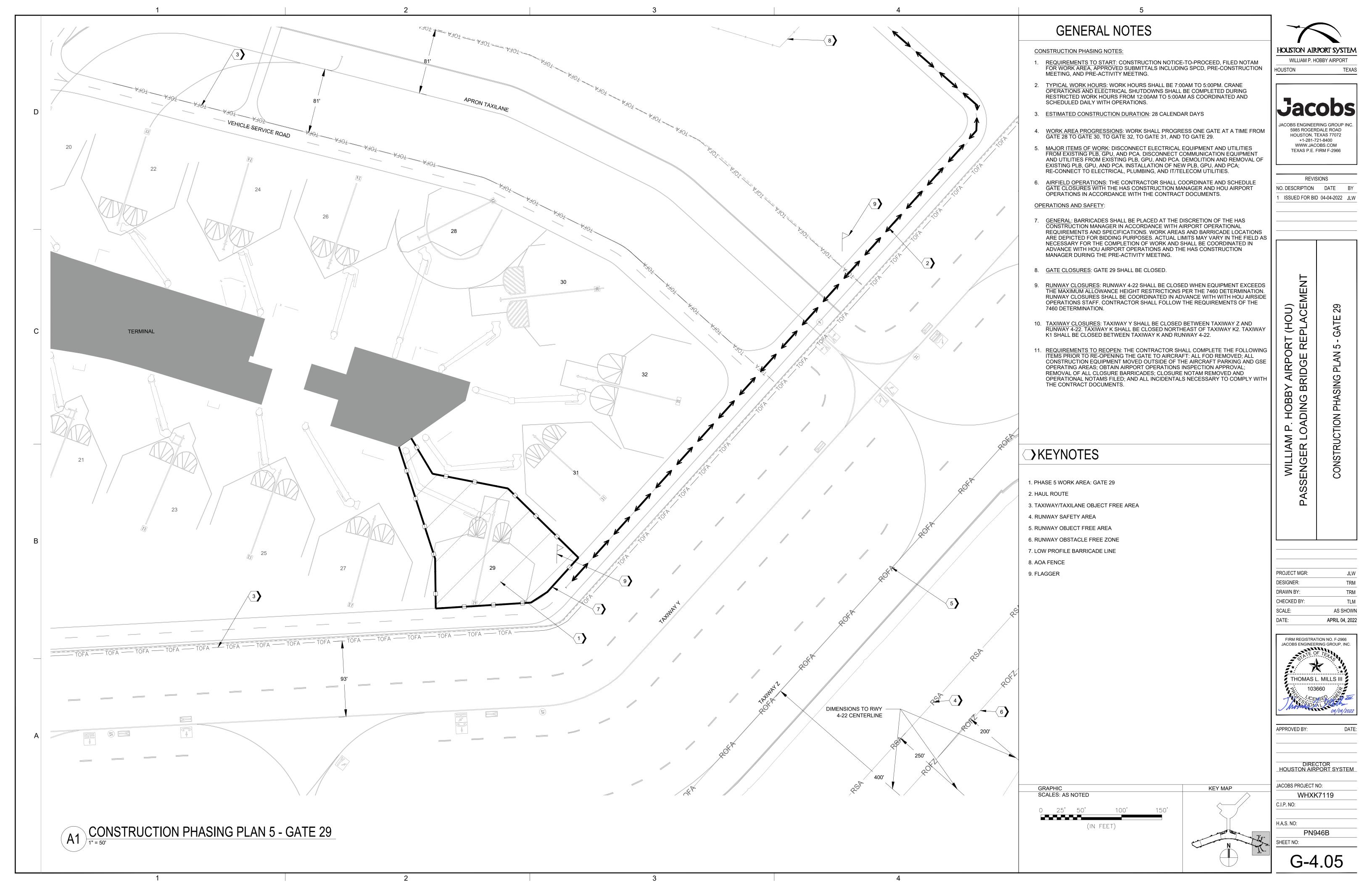
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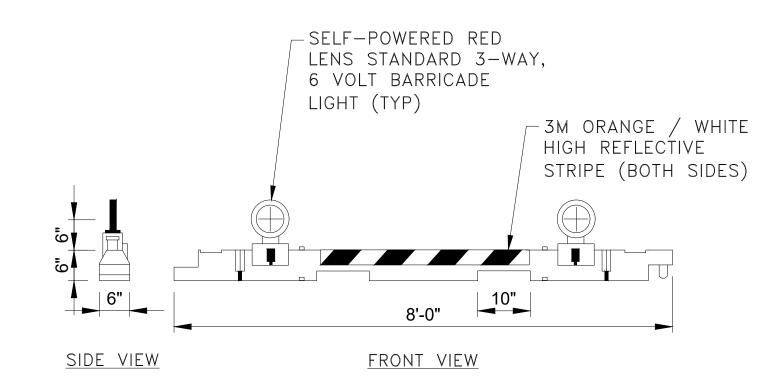








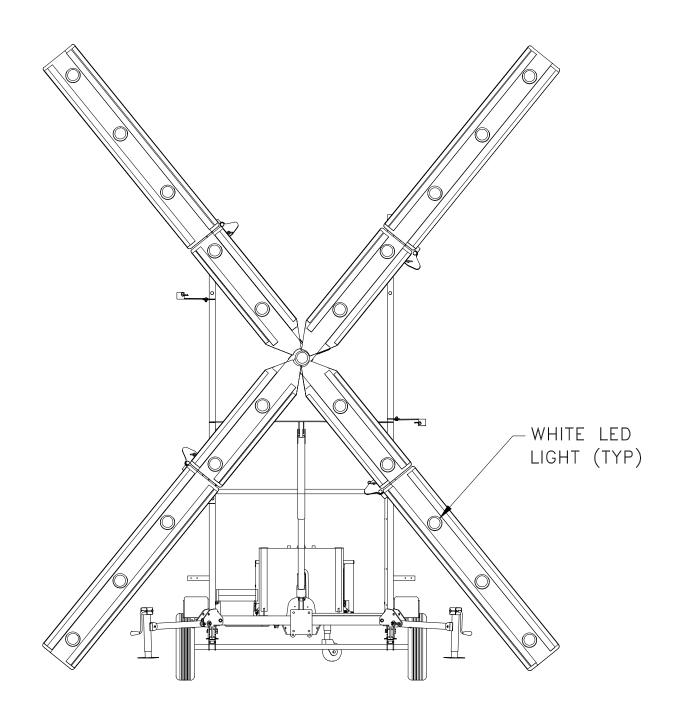




NOTES:

- 1. BARRICADES SEPARATING THE CONSTRUCTION AREA FROM THE EXISTING PAVEMENT SHALL BE CONTINUOUSLY CONNECTED END-TO-END WITH NO SPACING BETWEEN THEM.
- 2. BARRICADE STRIPING SHALL BE ORANGE AND WHITE CONFORMING TO FAA AC 150/5370-2G (OR LATEST EDITION) OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- 3. THE REQUIRED LIGHTS MUST BE RED AND FLASHING. INTENSITIES AND LUMINANCE MUST BE AT LEAST FIVE CANDELAS EFFECTIVE INTENSITY AND FLASH AT A RATE OF FROM 55 TO 160 FLASHES PER MINUTE.
- 4. LIGHTS MUST BE OPERATED BETWEEN SUNSET AND SUNRISE AND DURING PERIODS OF LOW VISIBILITY WHENEVER THE AIRPORT IS OPEN FOR OPERATIONS.
- 5. ALL BARRICADES SHALL BE FILLED WITH WATER UNLESS OTHERWISE DIRECTED BY HOU AIRPORT OPERATIONS.





NOTES:

3

- 1. CONTRACTOR SHALL PLACE LIGHTED RUNWAY CLOSURE MARKER AT EACH END OF CLOSED RUNWAY IN ACCORDANCE WITH THE PHASING PLANS. LIGHTED CLOSURE MARKERS SHALL BE PLACED ON TOP OF THE PAINTED NUMBER DESIGNATOR FOR EACH RUNWAY END, UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL ALSO TEMPORARY DISCONNECT POWER OF RUNWAY LIGHTS AT VAULT TO PREVENT THE POSSIBILITY OF THEM TURNING ON AND CREATING A POTENTIAL RUNWAY INCURSION. FOLLOW APPLICABLE HAS "LOCKOUT" "TAG—OUT" PROCEDURES.
- 2. THE CONTRACTOR SHALL MAINTAIN THE LIGHTED RUNWAY CLOSURE MARKERS UNTIL COMPLETION OF THE RUNWAY CLOSURE AND REMOVE AT END OF CLOSURE IN ACCORDANCE WITH PHASING PLANS AND AS DIRECTED BY AIRPORT OPERATIONS.
- 3. LIGHTED RUNWAY CLOSURE MARKERS SHALL BE LIT DURING SCHEDULED CLOSURES.
- 4. LIGHTED RUNWAY CLOSURE MARKERS SHALL MEET THE FOLLOWING FAA STANDARDS:

 FAA ADVISORY CIRCULAR AC 150/5345-55A, 'SPECIFICATION FOR L-893,
 LIGHTED VISUAL AID TO INDICATE TEMPORARY RUNWAY CLOSURE'
 - FAA ADVISORY CIRCULAR AC 150/5345-53D, 'AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM'
 - FAA ENGINEERING BRIEF 67D, 'LIGHT SOURCES OTHER THAN INCANDESCENT AND XENON FOR AIRPORT AND OBSTRUCTION LIGHTING FIXTURES'







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NO. DESCRIPTION DATE BY

1 ISSUED FOR BID 04-04-2022 JLW

WILLIAM P. HOBBY AIRPORT (HOU) PASSENGER LOADING BRIDGE REPLACEMEN

PROJECT MGR: JLW

DESIGNER: TRM

DRAWN BY: TRM

CHECKED BY: TLM

SCALE: AS SHOWN

DATE: APRIL 04, 2022



APPROVED BY: DAT

DIRECTOR HOUSTON AIRPORT SYSTEM

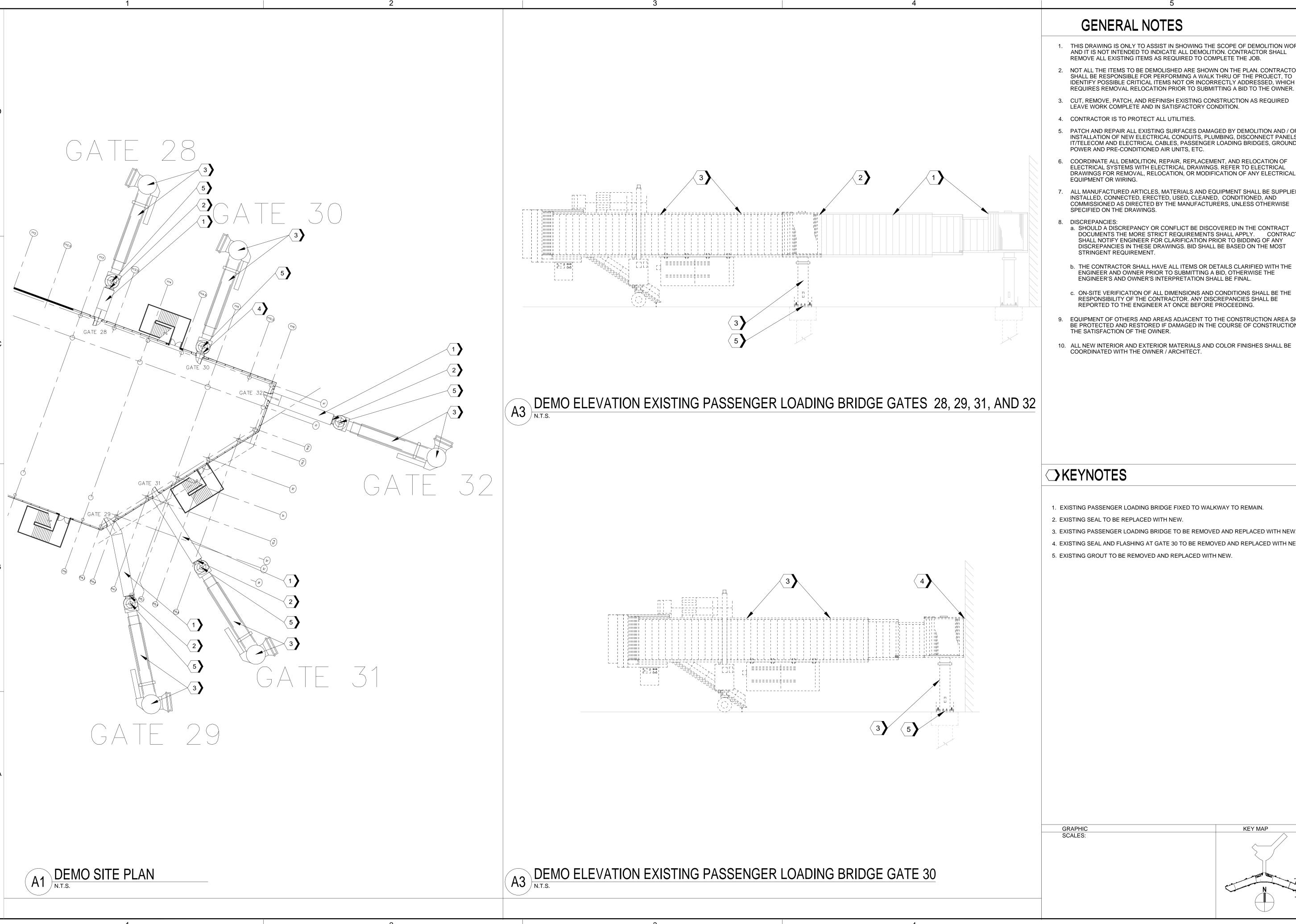
JACOBS PROJECT NO: WHXK7119

H.A.S. NO:

PN946B SHEET NO:

C.I.P. NO:

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- THIS DRAWING IS ONLY TO ASSIST IN SHOWING THE SCOPE OF DEMOLITION WORK AND IT IS NOT INTENDED TO INDICATE ALL DEMOLITION. CONTRACTOR SHALL REMOVE ALL EXISTING ITEMS AS REQUIRED TO COMPLETE THE JOB.
- NOT ALL THE ITEMS TO BE DEMOLISHED ARE SHOWN ON THE PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING A WALK THRU OF THE PROJECT, TO IDENTIFY POSSIBLE CRITICAL ITEMS NOT OR INCORRECTLY ADDRESSED, WHICH
- 3. CUT, REMOVE, PATCH, AND REFINISH EXISTING CONSTRUCTION AS REQUIRED LEAVE WORK COMPLETE AND IN SATISFACTORY CONDITION.
- 4. CONTRACTOR IS TO PROTECT ALL UTILITIES.
- 5. PATCH AND REPAIR ALL EXISTING SURFACES DAMAGED BY DEMOLITION AND / OR INSTALLATION OF NEW ELECTRICAL CONDUITS, PLUMBING, DISCONNECT PANELS, IT/TELECOM AND ELECTRICAL CABLES, PASSENGER LOADING BRIDGES, GROUND POWER AND PRE-CONDITIONED AIR UNITS, ETC.
- 6. COORDINATE ALL DEMOLITION, REPAIR, REPLACEMENT, AND RELOCATION OF ELECTRICAL SYSTEMS WITH ELECTRICAL DRAWINGS. REFER TO ELECTRICAL DRAWINGS FOR REMOVAL, RELOCATION, OR MODIFICATION OF ANY ELECTRICAL
- 7. ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED, CONDITIONED, AND COMMISSIONED AS DIRECTED BY THE MANUFACTURERS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- 8. DISCREPANCIES:
- a. SHOULD A DISCREPANCY OR CONFLICT BE DISCOVERED IN THE CONTRACT DOCUMENTS THE MORE STRICT REQUIREMENTS SHALL APPLY. CONTRACTOR SHALL NOTIFY ENGINEER FOR CLARIFICATION PRIOR TO BIDDING OF ANY DISCREPANCIES IN THESE DRAWINGS. BID SHALL BE BASED ON THE MOST
- b. THE CONTRACTOR SHALL HAVE ALL ITEMS OR DETAILS CLARIFIED WITH THE ENGINEER AND OWNER PRIOR TO SUBMITTING A BID, OTHERWISE THE ENGINEER'S AND OWNER'S INTERPRETATION SHALL BE FINAL.
- c. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER AT ONCE BEFORE PROCEEDING.
- 9. EQUIPMENT OF OTHERS AND AREAS ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED AND RESTORED IF DAMAGED IN THE COURSE OF CONSTRUCTION, TO THE SATISFACTION OF THE OWNER.
- 10. ALL NEW INTERIOR AND EXTERIOR MATERIALS AND COLOR FINISHES SHALL BE COORDINATED WITH THE OWNER / ARCHITECT.

→ KEYNOTES

- 1. EXISTING PASSENGER LOADING BRIDGE FIXED TO WALKWAY TO REMAIN.
- 2. EXISTING SEAL TO BE REPLACED WITH NEW.
- 3. EXISTING PASSENGER LOADING BRIDGE TO BE REMOVED AND REPLACED WITH NEW.
- 4. EXISTING SEAL AND FLASHING AT GATE 30 TO BE REMOVED AND REPLACED WITH NEW.
- 5. EXISTING GROUT TO BE REMOVED AND REPLACED WITH NEW.

WILLIAM P. HOBBY AIRPORT

HOUSTON

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AIRPORT (HOU) RIDGE REPLACEMENT

PROJECT MGR: DESIGNER: DRAWN BY: RC CHECKED BY: AS SHOWN APRIL 04, 2022

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APPROVED BY:

DIRECTOR HOUSTON AIRPORT SYSTEM

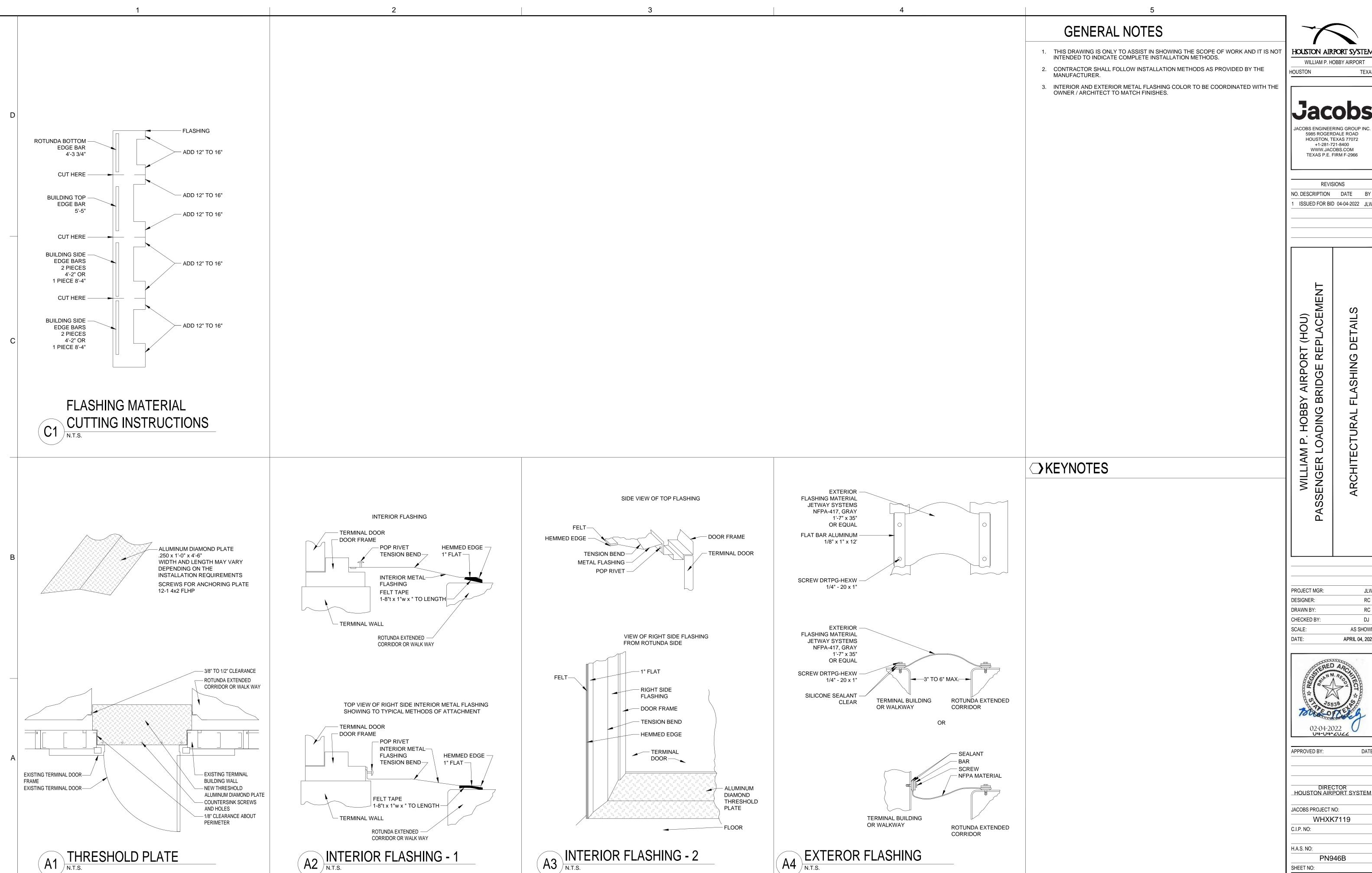
JACOBS PROJECT NO: WHXK7119

C.I.P. NO: H.A.S. NO:

KEY MAP

PN946B SHEET NO:

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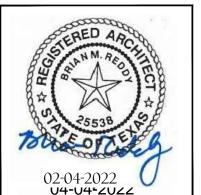
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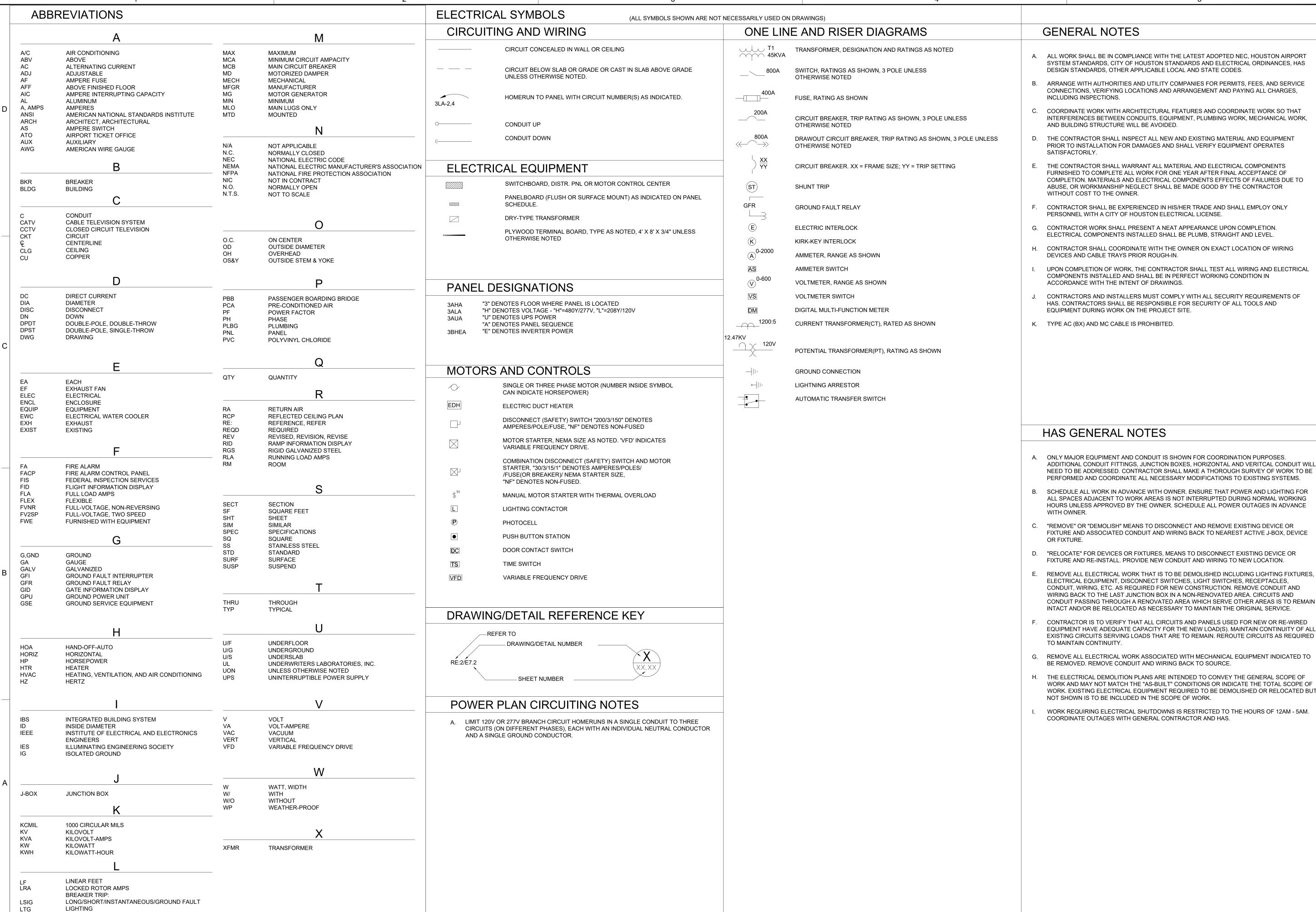


DIRECTOR HOUSTON AIRPORT SYSTEM

WHXK7119

PN946B

A-5.01



- A. ALL WORK SHALL BE IN COMPLIANCE WITH THE LATEST ADOPTED NEC, HOUSTON AIRPORT SYSTEM STANDARDS, CITY OF HOUSTON STANDARDS AND ELECTRICAL ORDINANCES, HAS
- ARRANGE WITH AUTHORITIES AND UTILITY COMPANIES FOR PERMITS, FEES, AND SERVICE CONNECTIONS, VERIFYING LOCATIONS AND ARRANGEMENT AND PAYING ALL CHARGES,
- COORDINATE WORK WITH ARCHITECTURAL FEATURES AND COORDINATE WORK SO THAT
- D. THE CONTRACTOR SHALL INSPECT ALL NEW AND EXISTING MATERIAL AND EQUIPMENT PRIOR TO INSTALLATION FOR DAMAGES AND SHALL VERIFY EQUIPMENT OPERATES
- FURNISHED TO COMPLETE ALL WORK FOR ONE YEAR AFTER FINAL ACCEPTANCE OF COMPLETION. MATERIALS AND ELECTRICAL COMPONENTS EFFECTS OF FAILURES DUE TO ABUSE, OR WORKMANSHIP NEGLECT SHALL BE MADE GOOD BY THE CONTRACTOR
- CONTRACTOR SHALL BE EXPERIENCED IN HIS/HER TRADE AND SHALL EMPLOY ONLY
- CONTRACTOR SHALL COORDINATE WITH THE OWNER ON EXACT LOCATION OF WIRING
- UPON COMPLETION OF WORK, THE CONTRACTOR SHALL TEST ALL WIRING AND ELECTRICAL
- CONTRACTORS AND INSTALLERS MUST COMPLY WITH ALL SECURITY REQUIREMENTS OF

- ADDITIONAL CONDUIT FITTINGS, JUNCTION BOXES, HORIZONTAL AND VERITCAL CONDUIT WILL NEED TO BE ADDRESSED. CONTRACTOR SHALL MAKE A THOROUGH SURVEY OF WORK TO BE
- SCHEDULE ALL WORK IN ADVANCE WITH OWNER. ENSURE THAT POWER AND LIGHTING FOR ALL SPACES ADJACENT TO WORK AREAS IS NOT INTERRUPTED DURING NORMAL WORKING HOURS UNLESS APPROVED BY THE OWNER. SCHEDULE ALL POWER OUTAGES IN ADVANCE
- C. "REMOVE" OR "DEMOLISH" MEANS TO DISCONNECT AND REMOVE EXISTING DEVICE OR FIXTURE AND ASSOCIATED CONDUIT AND WIRING BACK TO NEAREST ACTIVE J-BOX, DEVICE
- "RELOCATE" FOR DEVICES OR FIXTURES, MEANS TO DISCONNECT EXISTING DEVICE OR
- ELECTRICAL EQUIPMENT, DISCONNECT SWITCHES, LIGHT SWITCHES, RECEPTACLES, CONDUIT, WIRING, ETC. AS REQUIRED FOR NEW CONSTRUCTION. REMOVE CONDUIT AND WIRING BACK TO THE LAST JUNCTION BOX IN A NON-RENOVATED AREA. CIRCUITS AND CONDUIT PASSING THROUGH A RENOVATED AREA WHICH SERVE OTHER AREAS IS TO REMAIN INTACT AND/OR BE RELOCATED AS NECESSARY TO MAINTAIN THE ORIGINAL SERVICE.
- CONTRACTOR IS TO VERIFY THAT ALL CIRCUITS AND PANELS USED FOR NEW OR RE-WIRED EQUIPMENT HAVE ADEQUATE CAPACITY FOR THE NEW LOAD(S). MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS SERVING LOADS THAT ARE TO REMAIN. REPOUTE CIRCUITS AS REQUIRED
- G. REMOVE ALL ELECTRICAL WORK ASSOCIATED WITH MECHANICAL EQUIPMENT INDICATED TO
- H. THE ELECTRICAL DEMOLITION PLANS ARE INTENDED TO CONVEY THE GENERAL SCOPE OF WORK AND MAY NOT MATCH THE "AS-BUILT" CONDITIONS OR INDICATE THE TOTAL SCOPE OF WORK. EXISTING ELECTRICAL EQUIPMENT REQUIRED TO BE DEMOLISHED OR RELOCATED BUT
- WORK REQUIRING ELECTRICAL SHUTDOWNS IS RESTRICTED TO THE HOURS OF 12AM 5AM.

HOUSTON AIRPORT SYSTEM WILLIAM P. HOBBY AIRPORT

HOUSTON

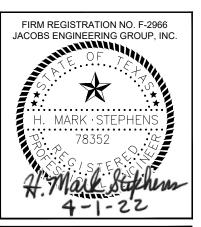
JACOBS ENGINEERING GROUP INC 5985 ROGERDALE ROAD HOUSTON, TEXAS 77072 +1-281-721-8400 WWW.JACOBS.COM TEXAS P.E. FIRM F-2966

REVISIONS NO. DESCRIPTION DATE BY

ISSUED FOR BID 04-04-2022 JLW

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PROJECT MGR: JLW DESIGNER: MM MM DRAWN BY: CHECKED BY: SCALE: AS SHOWN DATE: APRIL 04, 2022



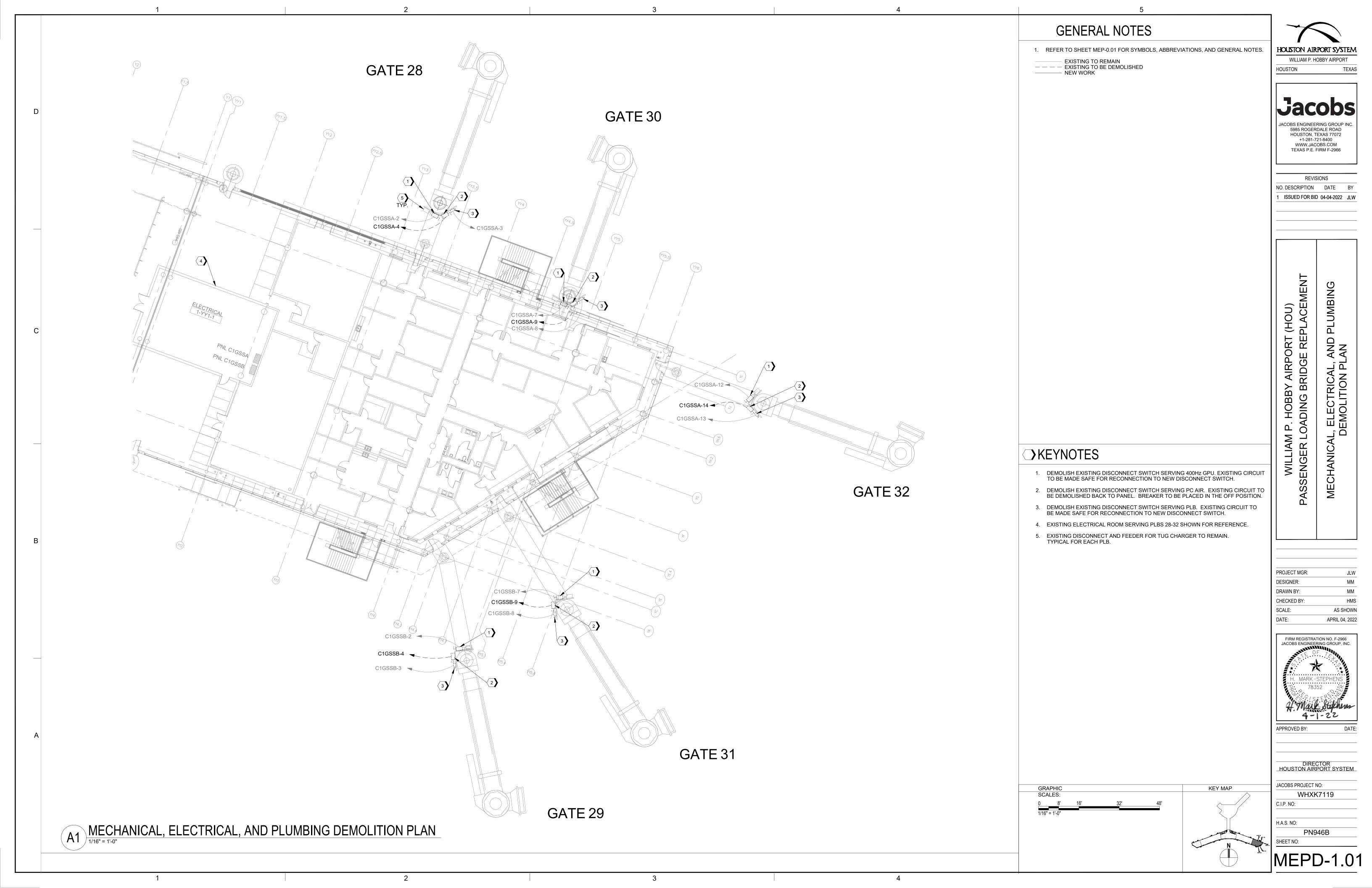
HOUSTON AIRPORT SYSTEM

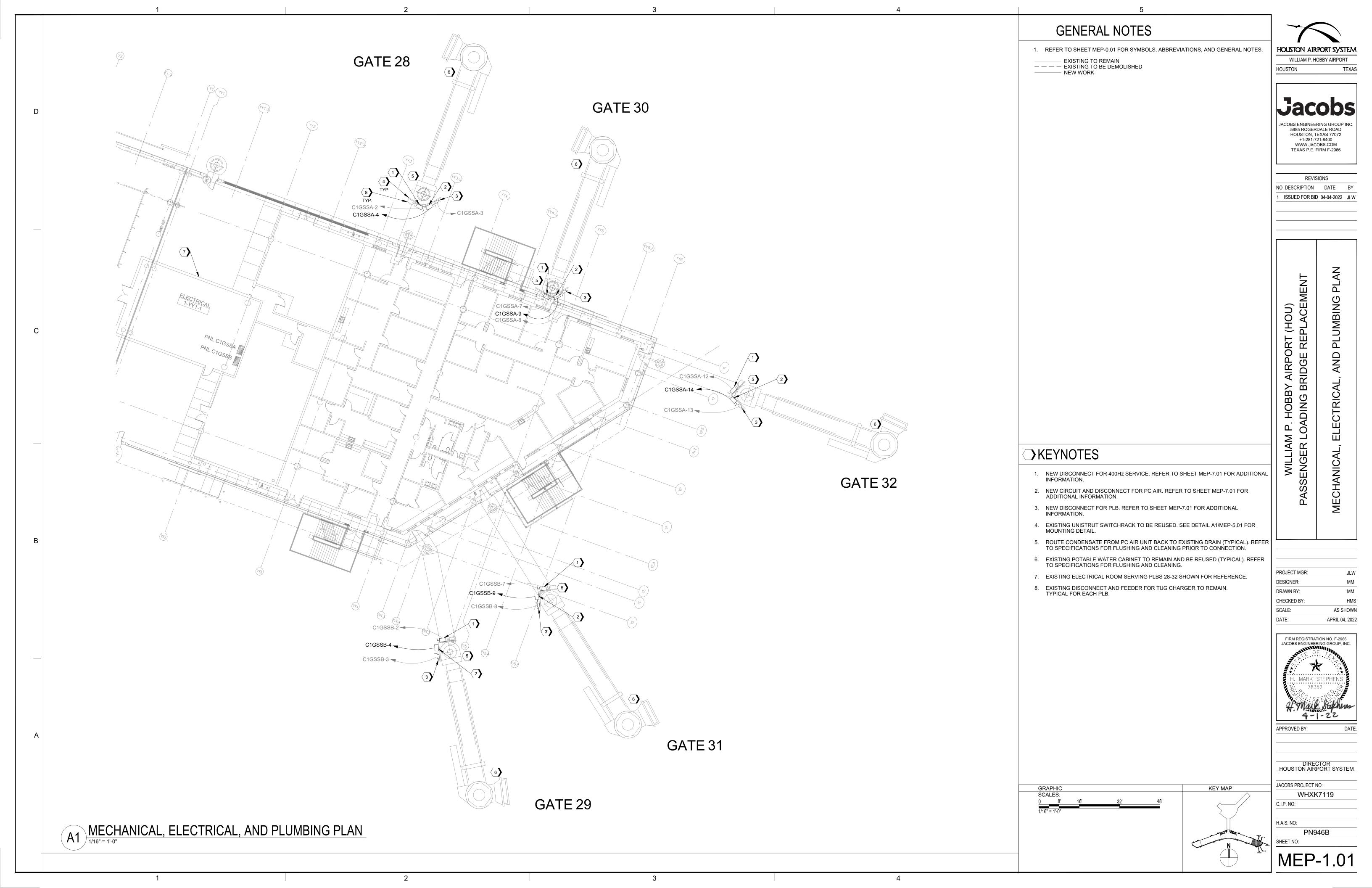
JACOBS PROJECT NO: WHXK7119 C.I.P. NO:

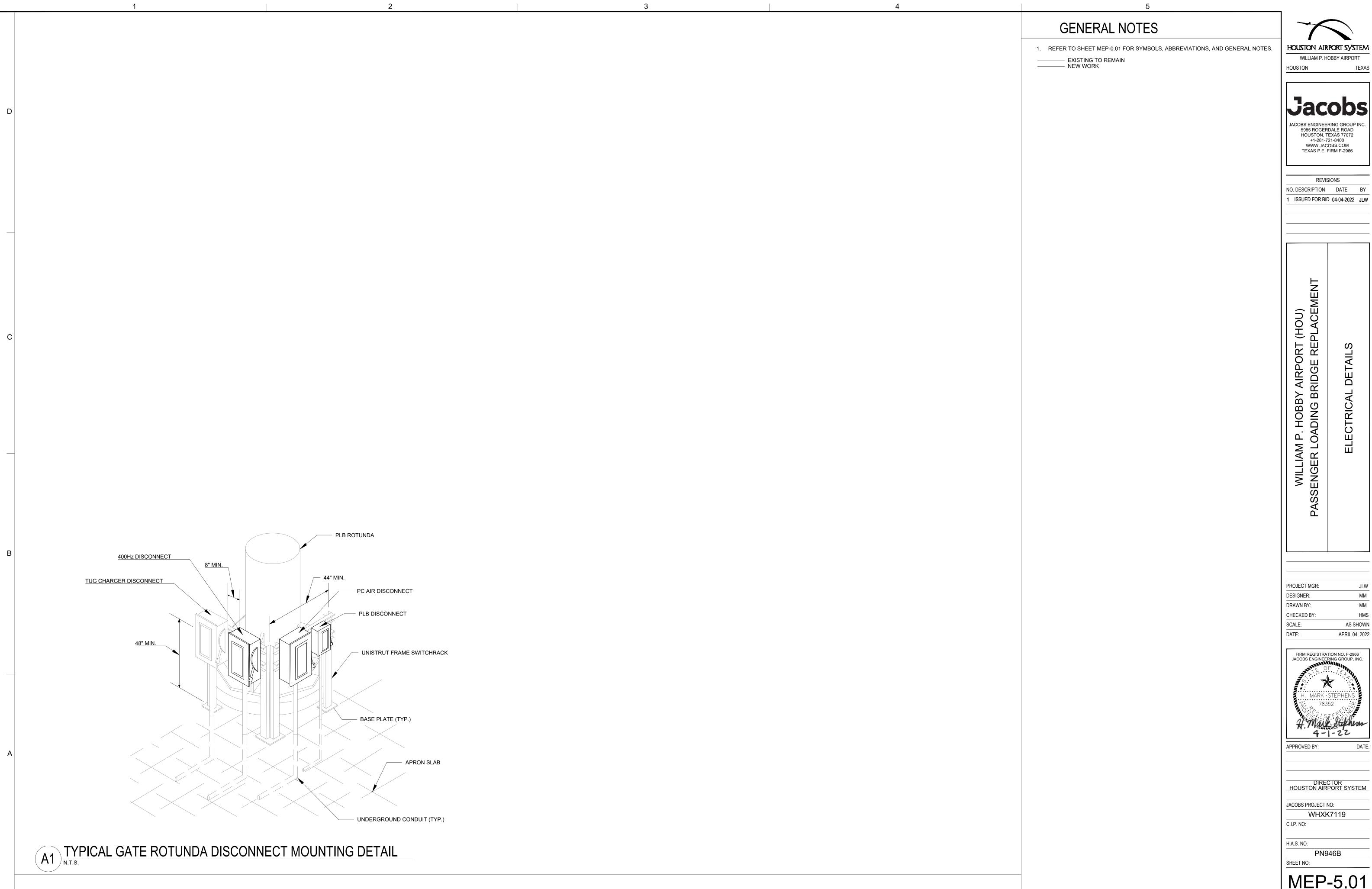
H.A.S. NO:

APPROVED BY:

PN946B SHEET NO:





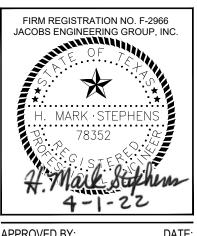


HOUSTON AIRPORT SYSTEM WILLIAM P. HOBBY AIRPORT

JACOBS ENGINEERING GROUP INC. 5985 ROGERDALE ROAD HOUSTON, TEXAS 77072 +1-281-721-8400 WWW.JACOBS.COM TEXAS P.E. FIRM F-2966

REVISIONS NO. DESCRIPTION DATE BY

JLW MM MM AS SHOWN APRIL 04, 2022

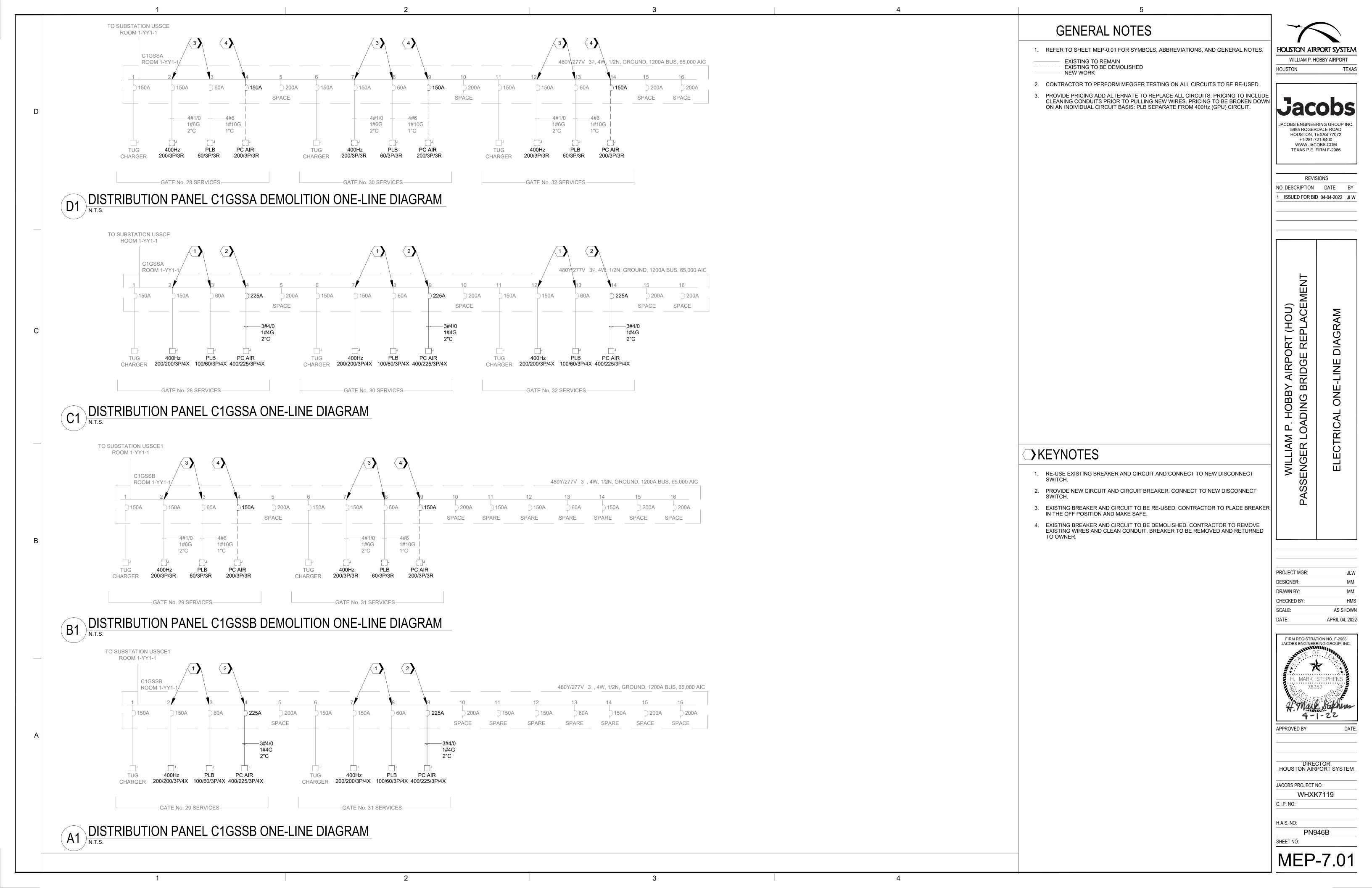


DIRECTOR HOUSTON AIRPORT SYSTEM

JACOBS PROJECT NO: WHXK7119

PN946B

MEP-5.01



DIST PBRD: C1GSSA VOLTAGE: 480Y/277V,3P,4W MAINS TYPE / LOCATION: Location: 1-YY1-1 Supply From: USSCE Mounting: WALL AIC: 65,000 MINIMUM BUS RATING: 1200A NEUTRAL BUS RATING: 100.00%

CKT NO.	DESCRIPTIONS	POLES	FRAME (AMPS)	TRIP (AMPS)	LOAD (kVOLT-AMPS)	CIRCUIT SIZE	NOTES
1	GATE 28 TUG CHARGER	3	225 A	150 A			E
2	GATE 28 400Hz	3	225 A	150 A			E
3	GATE 28 PLB	3	225 A	60 A			E
4	GATE 28 PC AIR	3	225 A	225 A			N
5	SPACE	3	225 A				
6	GATE 30 TUG CHARGER	3	225 A	150 A			E
7	GATE 30 400Hz	3	225 A	150 A			E
8	GATE 30 PLB	3	225 A	60 A			E
9	GATE 30 PC AIR	3	225 A	225 A			N
10	SPACE	3	225 A				
11	GATE 32 TUG CHARGER	3	225 A	150 A			E
12	GATE 32 400Hz	3	225 A	150 A			E
13	GATE 32 PLB	3	225 A	60 A			E
14	GATE 32 PC AIR	3	225 A	225 A			N
15	SPACE	3	225 A				
16	SPACE	3	225 A				

PANELBOARD NOTES: "E" INDICATES CIRCUIT EXISTING TO REMAIN
"D" INDICATES CIRCUIT EXISTING TO BE DEMOLISHED
"N" INDICATES NEW CIRCUIT

	DIST PBRD: 0	C1GSSB						
Su	Location: 1-YY1-1 upply From: USSCE1 Mounting: WALL	VOLTAGE: 480Y/: MAINS TYPE / LOCATION:	277V,3P,4W				A MINIMUM BUS RATIN NEUTRAL BUS RATIN	
CKT NO.		DESCRIPTIONS	POLES	FRAME (AMPS)	TRIP (AMPS)	LOAD (kVOLT-AMPS)	CIRCUIT SIZE	NOTES
1	GATE 29 TUG CHARGER		3	225 A	150 A			E
2	GATE 29 400Hz		3	225 A	150 A			Е
3	GATE 29 PLB		3	225 A	60 A			Е
4	GATE 29 PC AIR		3	225 A	225 A			N
5	SPACE		3	225 A				
6	GATE 31 TUG CHARGER		3	225 A	150 A			E
7	GATE 31 400Hz		3	225 A	150 A			E
8	GATE 31 PLB		3	225 A	60 A			E
9	GATE 31 PC AIR		3	225 A	225 A			N
10	SPACE		3	225 A				
11	SPARE		3	225 A	150 A			E
12	SPARE		3	225 A	150 A			E
13	SPARE		3	225 A	60 A			Е
14	SPARE		3	225 A	150 A			E
15	SPACE		3	225 A				
16	SPACE		3	225 A				

PANELBOARD NOTES: "E" INDICATES CIRCUIT EXISTING TO REMAIN "D" INDICATES CIRCUIT EXISTING TO BE DEMOLISHED
"N" INDICATES NEW CIRCUIT

LOAD ANALYSIS DIST. PNL C1GSSA

TAG	LGT	REC	EQP	MTR	HTG	COOL	KIT	CONN KVA	DMD KVA	AMPS 480V
GATE 28 TUG CHARGER			100					100	90	108
GATE 28 400Hz			90					90	81	97
GATE 28 PLB			49					49	44	53
GATE 28 PC AIR						112		112	101	121
GATE 30 TUG CHARGER			100					100	90	108
GATE 30 400Hz			90					90	81	97
GATE 30 PLB			49					49	44	53
GATE 30 PC AIR						112		112	101	121
GATE 32 TUG CHARGER			100					100	90	108
GATE 32 400Hz			90					90	81	97
GATE 32 PLB			49					49	44	53
GATE 32 PC AIR						112		112	101	121
TOTAL			717			336		1053		
WITH DIVERSITY			645			302			948	1140

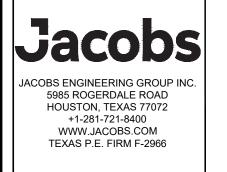
LOAD ANALY	SIS									
		_								
DIST. PNL C1	GSS	В								
								CONN	DMD	AMPS
TAG	LGT	REC	EQP	MTR	HTG	COOL	KIT	KVA	KVA	480V
GATE 29 TUG CHARGER			100					100	90	108
GATE 29 400Hz			90					90	81	97
GATE 29 PLB			49					49	44	53
GATE 29 PC AIR						112		112	101	121
GATE 31 TUG CHARGER			100					100	90	108
GATE 31 400Hz			90					90	81	97
GATE 31 PLB			49					49	44	53
GATE 31 PC AIR						112		112	101	121
TOTAL			478			224		702		
WITH DIVERSITY						202		102	633	760
WILL DIVERSILI			430			202			632	760

GENERAL NOTES

1. REFER TO SHEET MEP-0.01 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

WILLIAM P. HOBBY AIRPORT

HOUSTON



REVISIONS NO. DESCRIPTION DATE BY 1 ISSUED FOR BID 04-04-2022 JLW

WILLIAM P. HOBBY AIRPORT (HOU) PASSENGER LOADING BRIDGE REPLACEMENT

PROJECT MGR:	JLW
DESIGNER:	MM
DRAWN BY:	MM
CHECKED BY:	HMS
SCALE:	AS SHOWN
DATE:	APRIL 04, 2022



DIRECTOR HOUSTON AIRPORT SYSTEM

JACOBS PROJECT NO: WHXK7119

H.A.S. NO:

PN946B SHEET NO:

MEP-8.01

LOAD ANALYSIS DIST. PNL C1GSSB										
TAG	LGT	REC	EQP	MTR	HTG	COOL	KIT	CONN KVA	DMD KVA	AMPS 480V
GATE 29 TUG CHARGER			100					100	90	108
GATE 29 400Hz			90					90	81	97
GATE 29 PLB			49					49	44	53
GATE 29 PC AIR						112		112	101	121
GATE 31 TUG CHARGER			100					100	90	108
GATE 31 400Hz			90					90	81	97
GATE 31 PLB			49					49	44	53
GATE 31 PC AIR						112		112	101	121
TOTAL			478			224		702		

- THE FOLLOWING DOCUMENTS ADDRESS STRUCTURED CABLING SOLUTION FOR NETWORK (TN). TECHNOLOGY INFRASTRUCTURE ASSOCIATED WITH DATA, NETWORKS REQUIRED BY THE HOUSTON AIRPORT SYSTEM (HAS), FOR NETWORK EQUIPMENT INFORMATION REFERENCE TN DRAWINGS.
- THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, SPECIFICATIONS AND REQUIREMENTS OF OTHER DIVISIONS REQUIRE COORDINATION AND SHALL APPLY TO THE DIVISION 27 CONTRACTOR. ANY CONTRADICTING INFORMATION SHALL BE SUBMITTED VIA A REQUEST FOR INFORMATION (RFI).
- COMMUNICATION CABLING INTEGRATOR HEREAFTER REFERRED TO, AS "CONTRACTOR" SHALL PROVIDE ALL MATERIALS, COMPONENTS, TOOLS, AND LABOR TO COMPLETE A TELECOMMUNICATIONS INFRASTRUCTURE AS SET FORTH IN THE STRUCTURED CABLING SYSTEM DIVISION 27, TELECOMMUNICATIONS DRAWINGS AND ELECTRICAL DRAWINGS.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE TO DETERMINE THE EXTENT OF WORK AND CONDITION UNDER WHICH IT WILL BE DONE. REVIEW AND VERIFY CONTRACT DOCUMENTS IN RELATION TO FIELD CONDITIONS TO VERIFY ACCURACY. THE OWNER, OR THEIR DESIGNATED REPRESENTATIVE, SHOULD BE CONSULTED AS NEEDED FOR CLARIFICATION OR DIRECTION REGARDING ANY PROJECT RELATED QUESTIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE OWNER, OR THEIR DESIGNATED REPRESENTATIVE, PRIOR TO PROCEEDING WITH THE WORK OR RELATED WORK IN QUESTION.
- DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER, OR THEIR DESIGNATED REPRESENTATIVE, FOR CLARIFICATION.
- REFER TO TECHNOLOGY CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS A UNIT AND IN WHOLE IN THE BIDDING AND INSTALLATION OF THIS PROJECT.
- ELECTRICAL CONTRACTOR SHALL READ IN THEIR ENTIRETY ALL SECTIONS OF THE COMMUNICATIONS CABLING SYSTEM DOCUMENTS AND APPLY THEM AS APPROPRIATE FOR WORK IN THIS SECTION. REF DIVISION 27 AND TELECOMMUNICATIONS DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE MATERIALS, COMPONENTS, TOOLS, AND LABOR TO COMPLETE COMMUNICATIONS CABLING PATHWAY, ELECTRICAL POWER DISTRIBUTION AND GROUNDING SYSTEM AS SET FORTH IN THE COMMUNICATIONS CABLING SYSTEM DOCUMENTS AND THE ELECTRICAL DOCUMENTS, SPECIFICATIONS AND DRAWINGS.
- CONTRACTOR SHALL NOTE AND REPORT TO GC PERFORMED BY ELECTRICAL CONTRACTOR WHICH DOES NOT COMPLY WITH COMMUNICATIONS SPECIFICATIONS AND DRAWINGS AND ARE INTENDED FOR THE COMMUNICATION SYSTEMS COMPONENTS.
- 10. CONTRACTOR SHALL TAKE NECESSARY MEANS TO PROTECT COMMUNICATION SYSTEM COMPONENTS FROM MECHANICAL DAMAGE BEFORE, DURING AND AFTER CONSTRUCTION.
- 11. CONTRACTOR IS REQUIRED TO REFERENCE DIVISION 27 SPECIFICATIONS FOR ITEMIZED PRICING REQUIREMENTS.

COMMUNICATION PATHWAY

- OUTLET FACEPLATES MUST BE LABELED WITH THE JACK NUMBERS OR PATCH PANEL PORTS PER SPECIFICATIONS. ALL JACKS MUST BE FLUSH WITH THE FACEPLATE.
- BACK BOXES INSTALLED FOR COMMUNICATIONS DATA AND VOICE WIRING LERMINATION SHALL BE 4 11/16"X4 11/16"X3" DEEP BOXES TO ALLOW FOR THE REQUIRED WORKING CLEARANCE OF THE CAT6 UTP CABLE. THESE BOXES SHALL BE SEPARATE FROM ELECTRICAL JUNCTION BOXES AND BE EXCLUSIVELY FOR DATA AND VOICE COMMUNICATIONS.
- 3. MUD RINGS SHALL BE INSTALLED ON ALL COMMUNICATIONS WALL BOXES.
- OUTLETS HAVING MORE THAN TWO CABLES REQUIRE AN ADDITIONAL (1") CONDUIT PER WALL BOX. SUPPLY SOLUTIONS AND SHOP DRAWINGS SUBMITTALS FOR CONDUIT

CONDUITS TO COMMUNICATIONS WALL BOXES SHALL BE MINIMUM OF ONE IN. (1") IN DIAMETER AND SHALL BE COMPLETE WITH NYLON PULL STRING.

- SEALING MATERIALS AND SYSTEMS FOR WRITTEN APPROVAL OF MATERIAL/SYSTEMS PRIOR TO PURCHASE AND INSTALLATION. MATERIALS AND SYSTEMS SHALL BE COMPLETE UPON INSTALLATION.
- MATERIALS AND SYSTEMS SHALL BE COMPLETE UPON INSTALLATION. SWEEPING 90 DEG. BENDS AND NOT EXCEED 100 FEET. IF THESE CONDITIONS CAN NOT BE MET. A J-BOX MUST BE PLACED IN THE RUN, WITH THE ABILITY TO ACCESS BOX.
- CONDUITS SHALL HAVE CONNECTORS, PROTECTIVE BUSHINGS, PULL STRINGS AND SHALL BE GROUNDED.

COMMUNICATIONS ROOMS

- TELECOM ROOM LAYOUTS AND EQUIPMENT ARE SHOWN FOR COORDINATION AND INFORMATIONAL PURPOSES ONLY.
- 2. FURNISH AND INSTALL CABLE SUPPORT, CABLE MANAGEMENT AND ASSOCIATED HARDWARE WITHIN TELECOMMUNICATIONS ROOMS.

GROUNDING AND BONDING

- ALL GROUNDS USED SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE SYSTEM AS REQUIRED IN ARTICLE 250 OF NFPA 70 -NATIONAL ELECTRICAL CODE.
- 2. SURFACES SHALL BE PREPARED TO PROVIDE A PROPER PATH TO GROUND. ANY SURFACE TO BE GROUNDED MUST BE FREE OF PAINT OR OTHER COATING THAT MIGHT PREVENT AN EFFECTIVE GROUND. PAINT SHOULD BE SCRAPED AWAY UNTIL METALLIC SURFACE HAS BEEN EXPOSED BEFORE THE ATTACHMENT OF GROUNDING OR BONDING WIRE.
- CONTRACTOR TO INSTALL MANUFACTURER PROVIDED STAR WASHERS PER PANEL INSTALLED IN ORDER FOR PANELS TO BE BONDED TO RACK. ONLY ONE (1) STAR WASHER IS REQUIRED PER PANEL.
- 4. NO GROUND WIRE SHALL BE RAN IN CABLE RUNWAY WITH HORIZONTAL CABLING OR ATTACHED TO THE OUTSIDE OF THE RACEWAY. "L" BRACKETS ARE REQUIRED.

ELECTRICAL

FOR SPECIFIC POWER AND RECEPTACLE REQUIREMENTS IN THE PROJECT REFERENCE ELECTRICAL SPECIFICATIONS AND DRAWINGS AND VERIFY WITH COMMUNICATION SPECIFICATIONS AND DRAWINGS. REPORT TO GC DISCREPANCIES PRIOR TO PURCHASE OR INSTALLATION.

COMMUNICATIONS CABLE

- CONTRACTOR SHALL PROVIDE AND INSTALL HORIZONTAL COPPER DATA
- HORIZONTAL DATA CABLING SHALL CONSIST OF 24 AWG PLENUM CAT6 4PR UTP CABLES TO EACH DATA OUTLET.
- NO HORIZONTAL CABLE SHALL BE LONGER THAN 295 FEET FROM TERMINATION TO TERMINATION. IF THE CONTRACTOR BELIEVES ANY STATION CABLE WILL EXCEED THE 295 FEET LIMIT WRITTEN APPROVAL FROM THE OWNER'S ARCHITECT/ENGINEER WILL BE REQUIRED PRIOR TO INSTALLATION.
- PROVIDE CATEGORY 6 CABLING FROM EACH WORKSTATION OUTLET LOCATION TO THE TELECOM ROOM.
- HORIZONTAL DATA CABLING SHALL TERMINATE ON RACK MOUNTED PATCH PANELS LOCATED IN TELECOM ROOM, AND ON 8P8C ANGLED INSERTS AT THE OUTLET. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 6. COMMUNICATIONS CABLE SHALL NOT BE PAINTED.
- 7. LABEL CABLES PER OWNER STANDARD WITH OWNER PRIOR TO INSTALLATION.
- 8. ALL CABLING INSTALLED UNDERGROUND IN CONCRETE SLABS, IN DIRECT CONTACT WITH THE EARTH, LOCATIONS SUBJECT TO SATURATION WITH LIQUIDS AND UNPROTECTED LOCATIONS EXPOSED TO WEATHER SHALL BE CONSTRUCTED WITH APPROPRIATE WEATHER PROOFING COMPOUNDS AND

IT RESPONSIBILITY MATRIX									
IT RESPONSIBILITY MATRIX	GC	IT CONTRACTOR	OWNER						
NETWORK CABLING TO IDF		Х							
CONDUITS	Х								
J-BOXES	Х								
POWER>24VDC	Х								
OUTSIDE PLANT CONDUIT PATHWAY	Х								
PHONES			CONFIGURE						
COMPUTERS			CONFIGURE						
GROUNDING OSP CABLE		X							

TELECOM SYMBOL LEGEND

USER SPECIFIC (COMMON USE TERMINAL EQUIPMENT) xD DATA WALL DATA OUTLET (D), CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.

ABBREVIATIONS

AIR BLOWN FIBER

AUTOMATED EXTERNAL DEFIBRILLATOR

AFF ABOVE FINISHED FLOOR

AMERICAN WIRE GAUGE AWG

CON. CONDUCTOR

I/O INFORMATION OUTLET

IDF INTERMEDIATE DISTRIBUTION FRAME

LAN LOCAL AREA NETWORK

MDF MAIN DISTRIBUTION FRAME

NOT APPLICABLE

NIC NOT INCLUDED IN CONTRACT

OWNER FURNISH OWNER INSTALLED

TBB TELECOMMUNICATIONS BONDING BACKBONE

TBC TELECOMMUNICATIONS BONDING CONDUCTOR

TELECOMMUNICATIONS GROUND BUS BAR TGB

TELECOMMUNICATIONS MAIN BONDING CONDUCTOR

TMGB TELECOMMUNICATIONS MAIN GROUNDING BUS BAR

TR TELECOM ROOM

TRADE SIZE

UTP **UNSHIELDED TWISTED PAIR**

WP WATERPROOF

DRAWING SHEET LIST		
DIVISION 27	DRAWING LIST	REVISION
TN-0.01	TELECOMMUNICATIONS SYMBOLS AND ABBREVIATIONS	
TD-1.01	TELECOMMUNICATIONS DEMO	
TN-1.01	TELECOMMUNICATIONS APRON LEVEL	
TN-4.01	TELECOMMUNICATIONS DETAILS	

KEYNOTES

GRAPHIC SCALES:

GENERAL NOTES

PROJECT MGR: DESIGNER:

> DRAWN BY: CHECKED BY: AS SHOWN SCALE: DATE: APRIL 04, 2022

WILLIAM P. HOBBY AIRPORT

5985 ROGERDALE ROAD

HOUSTON, TEXAS 77072

+1-281-721-8400

WWW.JACOBS.COM

TEXAS P.E. FIRM F-2966

REVISIONS

I ISSUED FOR BID 04-04-2022 AL

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HOUSTON



APPROVED BY:

DIRECTOR HOUSTON AIRPORT SYSTEM

JACOBS PROJECT NO: WHXK7119 C.I.P. NO:

KEY MAP

H.A.S. NO:

PN946B SHEET NO:

