



**SAN ANTONIO
INTERNATIONAL AIRPORT**
SAN ANTONIO, TEXAS

**PERIMETER ROAD
RECONSTRUCTION
- PACKAGE 1**

CONSULTANTS

ATKINS

15900 La Cantera Parkway, Suite 26200
San Antonio, TX 78256
Phone: 210.828.9494



SUMMARY OF QUANTITIES

BASE BID

1	100.1	Mobilization		1.0	LS
2	100.2	Allowance 1 - Alternate Staging Area Preparation		1.0	ALLOW
3	100.3	Insurance and Bonds		1.0	LS
4	530.1	Barricades, Signs, and Traffic Handling		1.0	LS
5	P-100-2.1	Contractor Quality Control		1.0	LS
6	P-107-4.2	Asphaltic Concrete Pavement Removal Full Depth	1,670.0		SY
7	P-152-4.1	Unclassified Excavation	1,400.0		CY
8	P-156-5.1	Erosion and Sedimentation Control		1.0	LS
9	P-156-5.2	Erosion Control Logs	150.0		LF
10	P-156-5.4	Construction Entrance/Exit	300.0		SY
11	P-209-5.1	Crushed Aggregate Base Course	430.0		CY
12	P-403-8.1a	Bituminous Surface Course	20.0		TON
13	P-403-8.1b	Bituminous Binder Course	225.0		TON
14	247-1	Type A Grade 1 - Grade 2 Flexible Base	770.0		TON
15	P-501-8.1	Portland Cement Concrete 8"	1,920.0		SY
16	F-162-5.1	Temporary Fence 6' Chain Link Fence	190.0		LF
17	D-701-5.1	Corrugated Metal Pipe 18" Diameter, Including Backfill	180.0		LF
18	D-751-5.1	Safety End Treatment, Type II, 18" Diameter	4.0		EA
19	T-901-5.1	Hydro-Mulch Seeding	1.5		AC
20	T-905-5.1	Topsailing	800.0		CY

ADD ALTERNATE 1 (NOT IN CONTRACT)

2	100.2	Insurance and Bonds		1.0	LS
3	100.4	Plastic Drum Barricade		35.0	EA
4	P-100-2.1	Contractor Quality Control		1.0	LS
5	P-107-4.2	Asphaltic Concrete Pavement Removal Full Depth	1,430.0		SY
6	P-152-4.1	Unclassified Excavation	500.0		CY
7	P-152-4.2	Embankment from Existing Site	200.0		CY
8	P-156-5.1	Erosion and Sedimentation Control		2.0	LS
9	P-156-5.2	Erosion Control Logs	115.0		LF
10	247-1	Type A Grade 1 - Grade 2 Flexible Base	640.0		TON
11	P-501-8.1	Portland Cement Concrete 8"	1,590.0		SY
12	F-162-5.1	Temporary Fence 6' Chain Link Fence	160.0		LF
13	D-701-5.3	Reinforced Concrete Pipe 30" Diameter, Class IV, Including Backfill	310.0		LF
14	D-751-5.2	Safety End Treatment, Type II, 30" Diameter			EA
15	T-901-5.1	Hydro-Mulch Seeding	1.0		AC
16	T-905-5.1	Topsailing	500.0		CY

ADD ALTERNATE 1

1	100.1	Mobilization		1.0	LS
2	100.2	Insurance and Bonds		1.0	LS
3	530.1	Barricades, Signs, and Traffic Handling		1.0	LS
4	P-100-2.1	Contractor Quality Control		1.0	LS
5	P-107-4.2	Asphaltic Concrete Pavement Removal Full Depth	1,300.0		SY
6	P-152-4.1	Unclassified Excavation	800.0		CY
7	P-156-5.1	Erosion and Sedimentation Control		1.0	LS
8	P-156-5.2	Erosion Control Logs	110.0		LF
9	247-1	Type A Grade 1 - Grade 2 Flexible Base	530.0		TON
10	P-501-8.1	Portland Cement Concrete 8"	1,300.0		SY
11	F-162-5.1	Temporary Fence 6' Chain Link Fence	170.0		LF
12	D-701-5.2	Corrugated Metal Pipe 30" Diameter, Including Backfill	180.0		LF
13	D-751-5.2	Safety End Treatment, Type II, 30" Diameter	4.0		EA
14	T-901-5.1	Hydro-Mulch Seeding	1.0		AC
15	T-905-5.1	Topsailing	550.0		CY

INDEX OF DRAWINGS

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C005	CONTRACT LAYOUT PLAN AND GENERAL CONTRACT NOTES
C006	GENERAL CONTRACT NOTES
C007	FENCE AND EROSION CONTROL DETAILS
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CX105	PERIMETER ROAD CROSS SECTIONS - SHEET 5

REVISIONS

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1	SHEET REISSUED	6/14/16
2	SHEET REISSUED	6/17/16

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**SHEET TITLE
INDEX OF
DRAWINGS
AND
SUMMARY OF
QUANTITIES**

SHEET NUMBER

C001

**100%
BID SET**



**SAN ANTONIO
INTERNATIONAL AIRPORT**
SAN ANTONIO, TEXAS

**PERIMETER ROAD
RECONSTRUCTION
- PACKAGE 1**

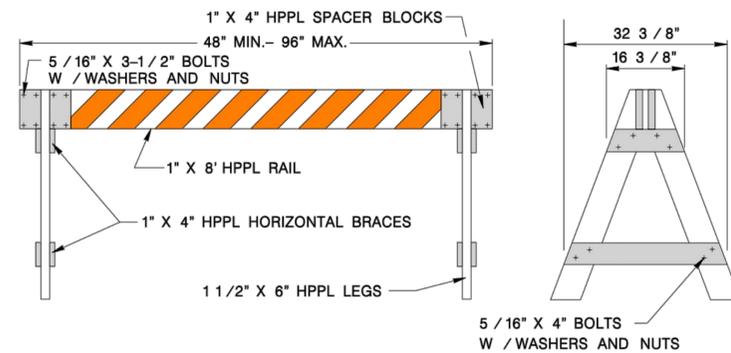
CONSULTANTS

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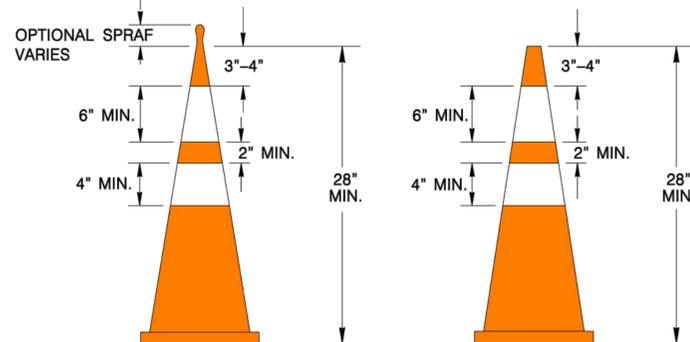
TYPE I BARRICADE



- Only the following Type I barricade shall be used in the City of San Antonio Right-Of-Way:
 - 1" x 8" plastic rail with 2" x 6" wooden legs.
 - 1" x 8" wooden rail with plastic legs.
 - 1" x 8" wooden rail with 2" x 6" wood legs.
 - No screws allowed for assembly of A-legs or rail.
 - Warning lights will be used as directed by the Traffic Engineer.
 - All Type I (4') barricades will be a minimum of 36" high and 60" wide. (For Construction Use Only)
 - All Type I (8') barricades with wooden legs shall be 2" X 6" wood only.
 - All Type I (4') barricades with wooden legs shall be 1" X 8" wood only.
- Type I Barricades shall not be used for partial and total street closures in construction work zones. Only Type III barricades shall be used for this purpose.
- Warning lights shall not be mounted on Type I barricades.

(See TxDOT BC-03 Sheets for specific construction information)

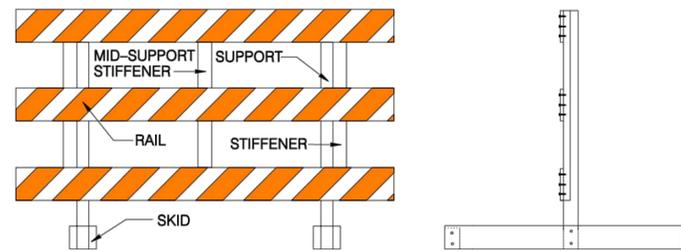
CONES



- Base for 28" high cones must weigh at least 9.5 lbs.
- Night time cones must have reflective collars.

(See TxDOT BC-03 Sheets for specific construction information)

Type III BARRICADE



- Only the following Type III barricade shall be used in the City of San Antonio Right-Of-Way.
 - Hollow polyvinyl or fiberglass tubing post with 1" X 8" wooden rails.
 - Hollow polyvinyl or fiberglass tubing post with plastic rails.
 - Skids must be wood or solid plastic only.
 - Warning lights shall not be mounted on Type III barricades.

(See TxDOT BC-03 Sheets for specific construction information)

TEMPORARY MARKINGS

- Solid double yellow painted lines shall be installed for temporary division of traffic or construction duration longer than five (5) days, with repainting to occur once monthly or at the discretion of the Traffic Engineer. (All cost of upkeep will be at the contractor's expense.)
- Solid double yellow tabs, or V/P panels shall be installed for temporary division of traffic for construction duration less than five (5) days, with re-tapping to occur at the discretion of the Traffic Engineer. NAILS SHALL NOT BE USED TO FIX TABS TO CEMENT OR BASE (All cost of upkeep will be at the contractor's expense.)

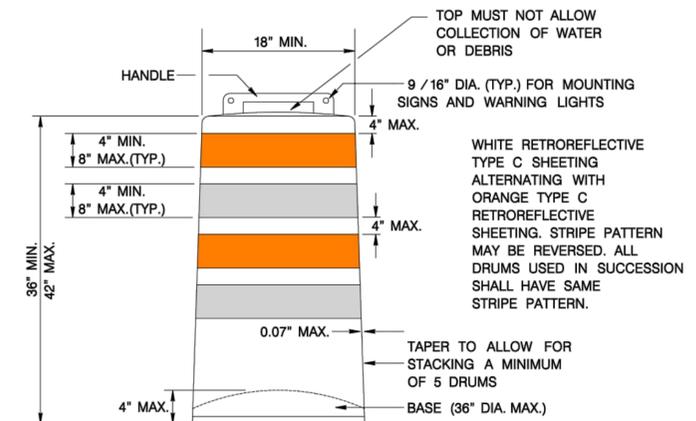
(See TxDOT BC-03 Sheets for specific construction information.)

TEMPORARY CONCRETE BARRIER

- All concrete barriers placed on City R.O.W. shall be low profile.
- No high profile barriers will be allowed.
- Reflectors will be required on each concrete barrier.

(See TxDOT BC-03 Sheets for specific construction information)

PLASTIC DRUMS



- Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
- The Engineer/Inspector shall provide written notice to the Contractor regarding the replacement of drums or other traffic control devices. The Contractor shall have a maximum of 24 hours to replace any plastic drums or other traffic control devices identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.
- Each drum must have a 40 lb. rubber or plastic snap on.
- No signs larger than 18" X 24" will be allowed to be mounted on plastic drums.
- No warning lights will be allowed to be mounted on plastic barrels.
- In lieu of a warning light, a yellow reflector will be acceptable.

(See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STANDARDS
**BARRICADE AND CONSTRUCTION
STANDARDS**
SHEET 3 OF 4

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIESELE #46894 ON 06-29-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

NO. SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: A.F.G.	DSGN. BY: EN.M.	CHKD. BY: J.D.F./EN.M.
SHEET NO.:		OF

REVISIONS

NO.	DESCRIPTION	DATE
1	NEW SHEET PER ADD#4	6/16/16

DATE ISSUED: 06-17-16

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DESIGNED BY:

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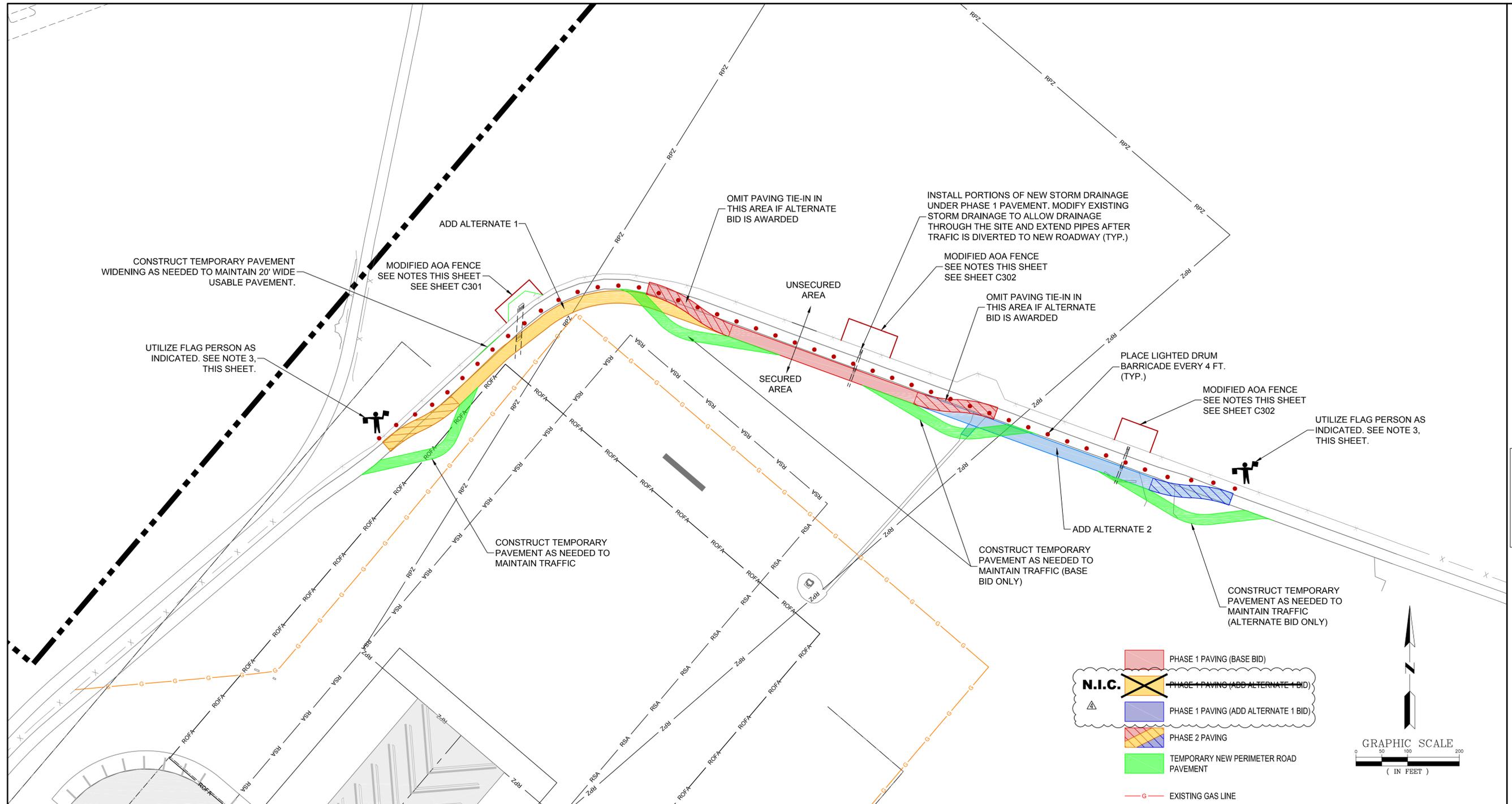
SHEET TITLE

**BARRICADE
DETAILS**

SHEET NUMBER

C008

**100%
BID SET**



PHASING NOTES

- EXISTING PERIMETER ROAD TO REMAIN OPEN THROUGHOUT CONSTRUCTION.
- 20' OF USABLE PAVEMENT SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION EXCEPT AS NOTED BELOW.
- CONTRACTOR MAY PROVIDE FLAG PERSONS IF ONLY ONE LANE OF TRAFFIC IS AVAILABLE BUT FLAG PERSONS SHALL BE PRESENT 24 HRS A DAY FOR THE DURATION OF RESTRICTED TRAFFIC.

MODIFIED AOA FENCE NOTES

- ESTABLISH A TEMPORARY OPENING IN THE EXISTING AOA SECURITY FENCE AS REQUIRED TO SAFELY INSTALL THE UNDERGROUND FACILITY UNDER THE FENCE LINE.
- PROVIDE AN OFF-DUTY OWNER AUTHORIZED LAW ENFORCEMENT OFFICER (LEO) AT THE FENCE OPENING TO CONTROL ACCESS TO AOA. A LEO SHALL BE IN POSITION 30 MINUTES PRIOR TO ESTABLISHING OPENING TO 30 MINUTES AFTER FENCE OPENING HAS BEEN RE-CLOSED.
- ESTABLISH A LIMITED ACCESS WORK AREA (LAWA) INSIDE THE AOA. NO WORK OPERATIONS SHALL BE PERFORMED OUTSIDE THE LAWA. ALL CONTRACTOR EMPLOYEES WORKING WITHIN THE LAWA MUST BE BADGED IN ACCORDANCE WITH AIRPORT SECURITY RULES.
- THE ACTIVE CONSTRUCTION AREA (ACA) SHALL BE LIMITED TO AREA LARGE ENOUGH TO INSTALL UNDERGROUND FACILITIES UNDER THE FENCE TO A POINT WHERE PERMANENT FENCE CAN BE RE-ESTABLISHED.
- CONTRACTOR SHALL PROSECUTE WORK IN THE ACA CONTINUOUSLY 24/7 UNTIL THE UNDERGROUND FACILITY HAS BEEN INSTALLED TO A POINT WHERE THE FENCE OPENING CAN BE CLOSED AND THE PERMANENT FENCE HAS BEEN RE-ESTABLISHED AND ACCEPTED BY OWNER AND TSA.
- A TEMPORARY OPENING IS ONLY AUTHORIZED TO ALLOW CONTRACTOR TO ACTIVELY PROSECUTE CONSTRUCTION. IF CONTRACTOR CHOOSES TO DISCONTINUE ACTIVELY PROSECUTING CONSTRUCTION THE OPENING SHALL BE CLOSED.
- SUBMIT MATERIALS METHODS FOR ESTABLISHING AND CLOSING THE FENCE OPENING.
- SUBMIT A CONSTRUCTION OPERATIONS PLAN FOR APPROVAL OUTLINING STEP BY STEP PROCEDURES AND SCHEDULE FOR ALL WORK RELATED TO INSTALLING THE UNDERGROUND FACILITY UNDER THE FENCE.

PHASE 1 PAVING (BASE BID)

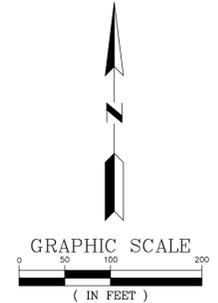
N.I.C. **PHASE 1 PAVING (ADD ALTERNATE 1 BID)**

PHASE 1 PAVING (ADD ALTERNATE 1 BID)

PHASE 2 PAVING

TEMPORARY NEW PERIMETER ROAD PAVEMENT

EXISTING GAS LINE



REVISIONS

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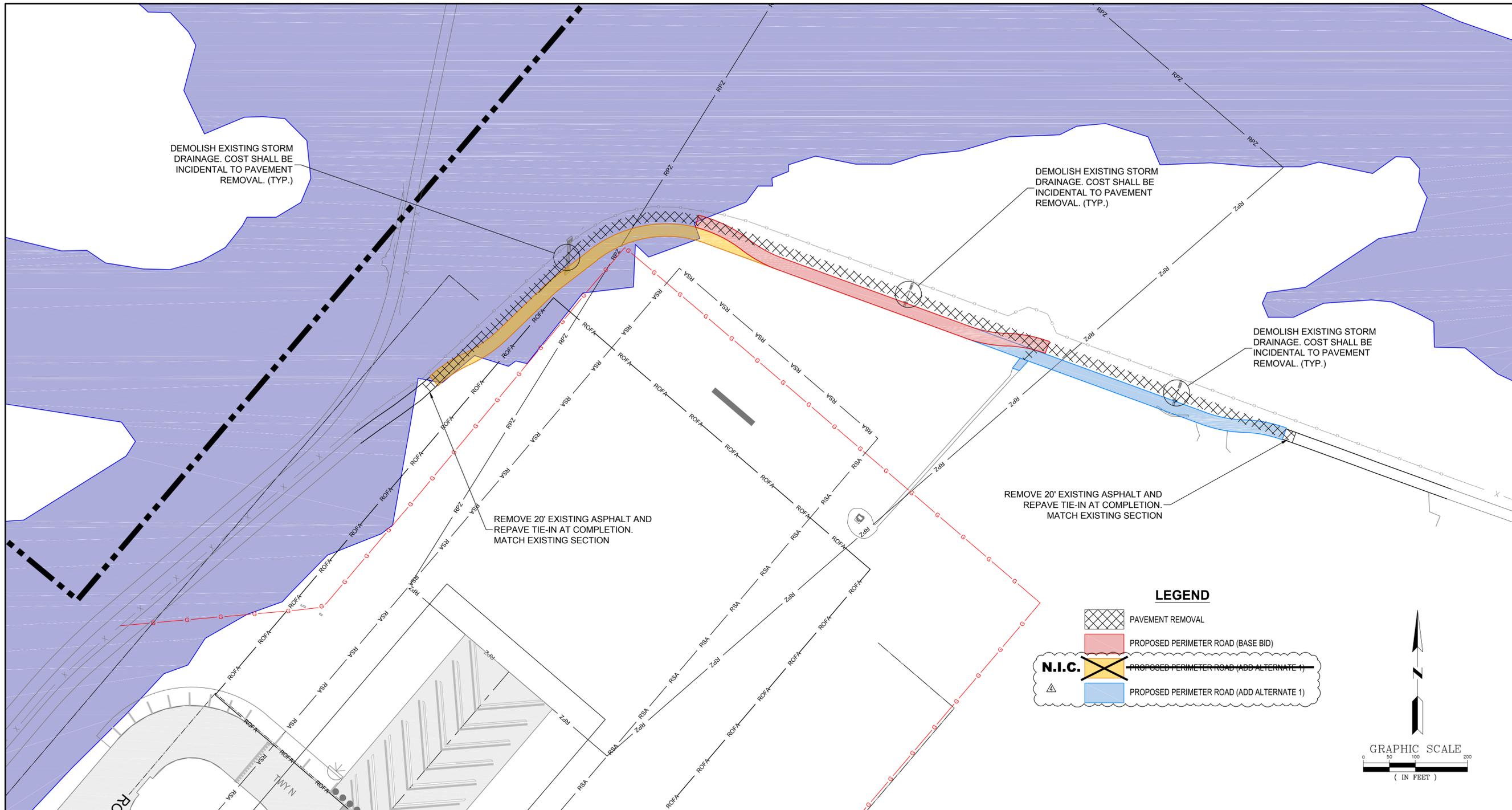
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DESIGNED BY:

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SHEET TITLE

**PHASING PLAN
AND PHASING
NOTES**

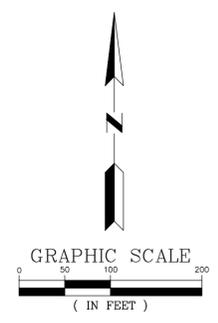
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C009

**100%
BID SET**



LEGEND

- PAVEMENT REMOVAL
- PROPOSED PERIMETER ROAD (BASE BID)
- PROPOSED PERIMETER ROAD (ADD ALTERNATE 1)
- PROPOSED PERIMETER ROAD (ADD ALTERNATE 1)



GENERAL NOTES

1. EXISTING UTILITY INFORMATION SHOWN ON THE PLANS CONCERNING THE TYPE, SIZE AND LOCATION WERE COMPILED BASED ON THE UTILITY RECORDS AVAILABLE TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS NOTED OR SPECIFIED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE RESET OR RELOCATED BY THE UTILITY COMPANY CONCERNED UNLESS NOTED OTHERWISE.
2. ANY ITEM NOT LISTED AS TO BE REMOVED SHALL BE PROTECTED FROM DAMAGE. ANY RESULTING DAMAGE FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. AT LOCATIONS NOTED ON PLANS, CONTRACTOR SHALL PROVIDE A FULL DEPTH SAWCUT, TO PROVIDE A PLUMB, CLEAN VERTICAL FACE FOR PROPOSED PAVEMENT.
4. PAVEMENT REMOVAL SHALL INCLUDE ASPHALT AND BASE MATERIAL AND SHALL BE PAID FOR UNDER ITEM P-107.

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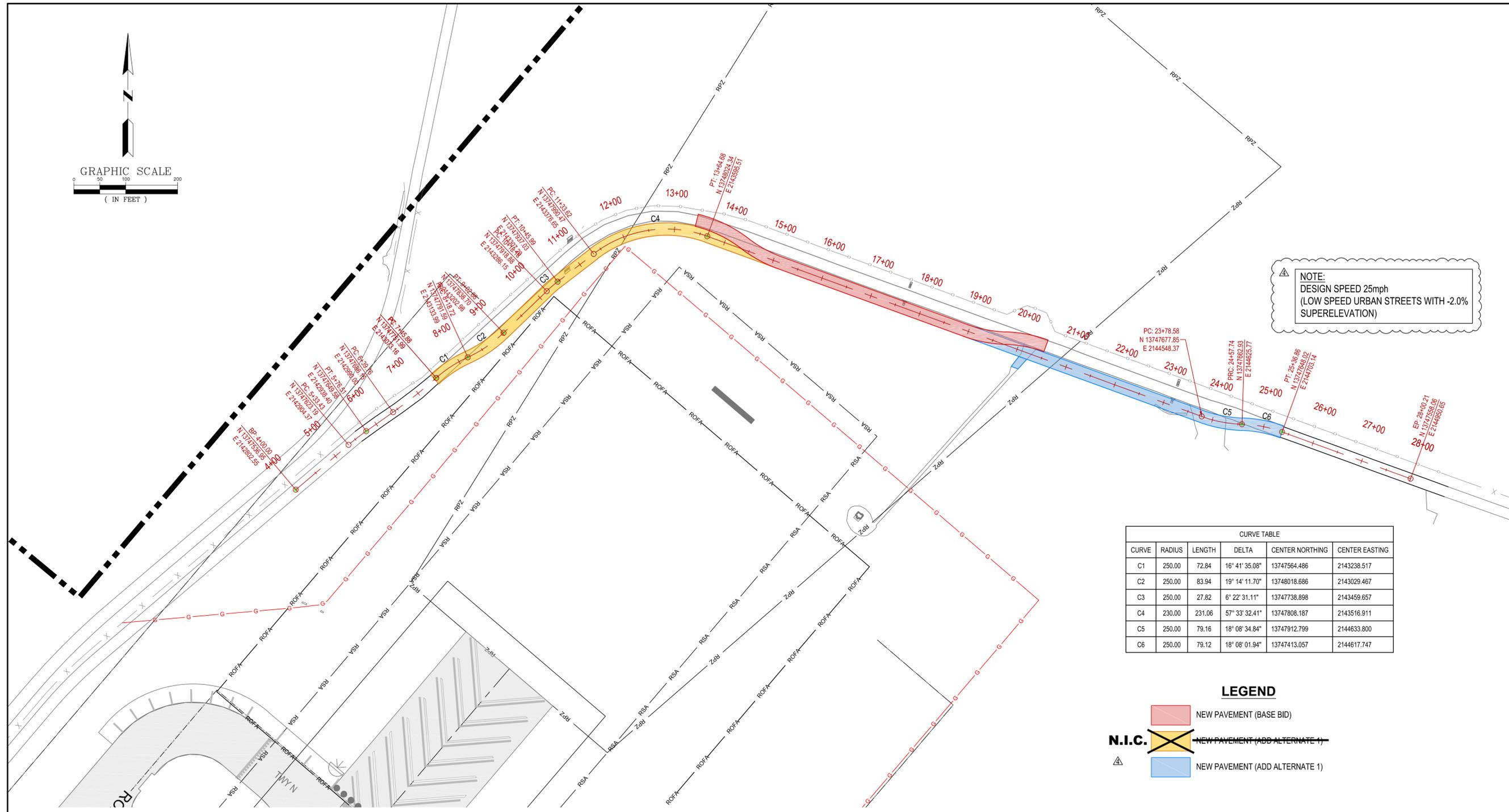
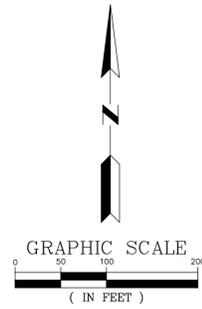
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SHEET TITLE

**DEMOLITION
PLAN**

SHEET NUMBER
C100

**100%
BID SET**



NOTE:
DESIGN SPEED 25mph
(LOW SPEED URBAN STREETS WITH -2.0%
SUPERELEVATION)

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CENTER NORTHING	CENTER EASTING
C1	250.00	72.84	16° 41' 35.08"	13747964.486	2143238.517
C2	250.00	83.94	19° 14' 11.70"	13748018.686	2143029.467
C3	250.00	27.82	6° 22' 31.11"	13747738.898	2143459.657
C4	230.00	231.06	57° 33' 32.41"	13747808.187	2143516.911
C5	250.00	79.16	18° 08' 34.84"	13747912.799	2144633.800
C6	250.00	79.12	18° 08' 01.94"	13747413.057	2144617.747

LEGEND

- NEW PAVEMENT (BASE BID)
- N.I.C. NEW PAVEMENT (ADD ALTERNATE 1)
- NEW PAVEMENT (ADD ALTERNATE 1)

REVISIONS

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GEOMETRY PLAN

SHEET NUMBER
C200

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BID SET**