



City of San Antonio
TRANSPORTATION AND CAPITAL IMPROVEMENTS

ADDENDUM No. 2

FORMAL INVITATION FOR BIDS (IFB)

PROJECT NAME: Lackland Gateway Corridor Project # 23-01455

DATE: August 24, 2016

This addendum is separated into sections for convenience; however, all contractors, subcontractors, material men, and other parties shall be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any party affected from performing as per instructions, providing that the information is set forth one time any place in this addendum. These documents shall be attached to and become part of the Contract Documents for this project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their proposal package.

GENERAL:

1. The following changes and/or additions to the Contract Documents, via this addendum, shall apply to proposals made for and to the execution of the various parts of the work affected thereby.
2. Careful note of the Addendum shall be taken by all interested parties and all trades affected shall be fully advised in their performance of the work involved.

GENERAL COMMENTS:

1. Bid Opening date has been changed to **September 13, 2016**.

SPECIFICATIONS:

SECTION 020 BID FORM

- 2.1 Substitute the revised 020 Bid Form in its entirety reflecting the Additive Alternate delineated in 01 23 00-1, 1.03A.

SECTION 024 UNIT PRICING FORM

- 2.2 Substitute the revised 024 Unit Pricing Form. Reference "Questions and Answers Item #1". Refer to Attachment 02.B.

SECTION 01 23 00 ALTERNATES

- 2.3 1.03 Schedule of Alternates: Par A.2 Change the paragraph to read as follows:
"2. Additive Alternate Bid Item: Provide one (1) year option for extended maintenance period from date of final Acceptance of Project as specified in Section 32 93 10 – LANDSCAPE MAINTENANCE. At the Owner's discretion, the maintenance period may be extended in one (1) year increments for a total maximum maintenance period of three (3) years."

SECTION 01 40 00, QUALITY REQUIREMENTS

- 2.4 Part 3, Execution: Insert the new Par. 3.06 as follows:
"3.06 INSPECTIONS BY OTHERS

A. Coordinate with and provide access to the site of the representatives of the San Antonio River

Authority concerning the inspection of the installation of the low impact development BMP's."

SECTION 91 91 13, EXTERIOR PAINTING

- 2.5 Part 3, Execution, Par. 3.07A, Color Schedule Items 1 through 10. Change color "Gun Metal Gray" to "Series 1071, 7C Cool Grey, Color No. A2663, Fluoronar Semi-Gloss."
- 2.6 Part 3, Execution, Par. 3.07, Color Schedule, substitute the revised subparagraph "11. Monument Entry Sign" in its entirety per the following:
 - "11. Monument Entry Sign:
 - a. Blade – Air Force Blue, Series 1071 287C Brite Blue, Color No. B2447, Fluoronar Semi-Gloss.
 - b. Propeller Blade – Silver, Series 1071 877C Silver, Color No. A2028, Fluoronar Semi-Gloss."

SECTION 26 56 30, SOLAR CELLULAR EMERGENCY TOWER

- 2.6 REPLACE section with revised section, attached (11 pages). Attachment 02.C.

SECTION 32 91 13, SOIL PREPARATION

- 2.7 Part 1, General, Par. 1.05 Source Quality Control, substitute the revised subparagraph 1.05, B.3, b,1),(a) as follows:
 - "(a) Testing for Soil Foodweb biological parameters, and associated indicators including soil organic matter and microbial activity."
- 2.8 Part 1, General, Article 1.05 Source Quality Control, Par. 2.c insert the following two additional prior approved soil labs:
 - 3) Soil Foodweb, Inc., (530)589-99447; www.soilfoodweb.com
 - 4) Soil Foodweb New York, Inc., (631)750-1533; www.soilfoodwebnewyork.com"
- 2.9 Part 1, General, Article 1.06 Submittals, Par. A.3.b. Substitute the following revised subparagraph "b" in its entirety:
 - "b. Soils Testing (Soil chemistry and soil biology and soils analysis),"
- 2.10 Part 2, Products, Article 2.02 Soil Additives and Amendments, Par. 8.a. Substitute the following revised paragraph "8.a" in its entirety per the following:
 - "8. Approved Vendors working with natural growing systems (or approved substitute):
 - a. LCE:
 - 1) Sustainable Growth Texas, LLC, Austin/Houston (512)636-3711; Sustainable Growth Houston, LLC (936)232-5739; www.sustainablegrowthtexas.com.
 - 2) Green Grow Organics, Bulverde, Texas (210)275-8200, www.greengroworganics.com
- 2.11 Part 2, Products, Article 2.03 Miscellaneous, Par. A. Substitute the following Par. "A" in its entirety:
 - "A. Post-Emergence Herbicide (Riparian Areas):
 - a. Round-Up Custom by Monsanto Corp.
 - b. Rodeo by Dow Agrosiences.
 - B. Pesticides" (*spelling correction*)
- 2.12 Part 3, Execution, Article 3.02 Weed Treatment, Par. A.1. Substitute the following Par. "A.1" and "A.2" in its entirety:
 - "A. All site locations to receive planting where existing surface vegetation exists shall be treated with post-emergent herbicide.
 - a. Repeat treatment as required that no existing surface vegetation is present at the beginning of work on the landscape planting of the Project.
 - a. Perform repeat treatments at no additional cost to the Owner.
 - b. Process encompasses initial preparation / clearing of site prior to initiation of mass grading of site to avoid live plants and roots being incorporated into the subgrade material.
 - a. Subsequent use of herbicide shall be only upon approval of Landscape Architect."

SECTION 32 92 19, SEEDING

- 2.13 Part 2, Products, Article 2.03 Accessories, Par. E. Substitute the revised Par. "E" in its entirety as follows:
 - "E. Herbicide and Pesticide: Refer to Section SOIL PREPARATION for products."

SECTION 32 92 23, SODDING

- 2.14 Part 2, Products, Article 2.03, Miscellaneous Landscape Materials, Par. "B". Substitute the revised Par. "B" in its entirety as follows:
 - "B. Herbicide and Pesticide: Refer to Section SOIL PREPARATION for products."

SECTION 32 93 00, EXTERIOR PLANTS

- 2.15 Part 2, Products, Article 2.02, Plant Materials, subparagraph C.2.b. Substitute the revised subparagraph "b" in its entirety as follows:
"b. Product well-cured, heeled-in stock."
- 2.16 Part 2, Products, Article 2.03, Miscellaneous Landscape Materials, Par. G. Substitute the revised Par. "G" in its entirety as follows:
"G. Herbicide and Pesticide: Refer to Section SOIL PREPARATION for products."
- 2.17 Part 3, Execution, article 3.07, Bio-augmentation and Bio-stimulant Amendments. Insert the following new subparagraph A.4 as follows:
"4. Apply amendments to plant materials within bioretention BMPs upon planting as a one-time spot treatment for first year establishment."

SECTION 32 93 10 LANDSCAPE MAINTENANCE

- 2.18 Part 1, General, Article 1.04 Quality Assurance, Par. B Vegetation, Superintendent Clarification. The Vegetation Superintendent will be under the employ of the City of San Antonio.
"1.04 B. Vegetation Superintendent:
1. Vegetation Superintendent will be under the employ of the Owner.
2. Vegetation Superintendent shall be the Owner's representative to observe, test, evaluate and monitor the work related to watering, weeding, reinstallation of seeded areas, and application of herbicides and pesticides.
a. Contractor shall coordinate with and accommodate access of the Vegetation Superintendent on-site to observe and inspect all installation and maintenance of work for the entire duration of the installation, establishment and maintenance period.
b. Contractor shall comply with directives as may be issued by the Vegetation Superintendent to correct any deficiencies within the establishment and maintenance of the landscape.
3. Responsibilities:
a. Vegetation Superintendent shall keep a daily log to verify Contractor activities on-site to assist the Contractor in identifying any problems and assist the Contractor in determining how to address an issue if necessary, and verify that the issue has been corrected on the behalf of the Owner.
b. Concerning stormwater BMPs, the Vegetation Superintendent will inspect the stormwater BMPs with the appropriate Contractor designated employee with the Contractor being responsible for the stormwater BMPs. The Vegetation Superintendent will report to the Owner noting deficiencies that have not been addressed. Contractor remains totally responsible for the performance of the BMPs and maintaining all of the required SWPPP and associated documentation."
- 2.19 Part 1, General, Article 1.05 Submittals; delete the subparagraph A.1 and substitute the revised subparagraph "A.1" in its entirety as follows:
"1. Soils Testing (Soil Chemistry and Soil Biology Parameters)."
- 2.20 Part 1, General, Article 1.05 Submittals, Par. B. Substitute the revised Paragraph "B" in its entirety as follows:
"B. Site Reports: Include date, time, personnel, condition of plants, activities, temperature, precipitation, irrigation applied; record:
1. Contractor and Vegetation Superintendent:
a. Required for each visit for establishment and maintenance purposes.
b. Volume of water applied and area applied to.
c. Diagnosis for treatment of unhealthy plants.
d. Removal of dead plants, with quantity and diagnosis.
e. Replanting.
f. Volume of debris removed from site.
2. Contractor:
a. Pesticide application; provide all additional reports and recordkeeping required by law.
b. Herbicide application; provide all additional reports and recordkeeping required by law.
3. Contractor shall submit site reports weekly to Vegetation Superintendent with copy to Landscape Architect."
- 2.21 Part 3, Execution, Article 3.04 Maintenance. Insert the following sentence at the end of subparagraph A.5.b:
"Mechanical means shall be approved by Vegetation Superintendent."
- 2.22 Part 3, Execution, Article 3.04 Maintenance, Par. C. Substitute the revised Par. "C" in its entirety as follows:
"C. Liquid Biological Amendments (LBA): Apply LBAs over all planting areas (trees, shrubs, groundcovers, turf/grass and wildflowers at rate and frequency as to be prescribed by the LBA Contractor."

- 2.23 Part 3, Execution, Article 3.04 Maintenance, Par. C.1.a. Insert the following sentence at the end of subparagraph 1.a:
"Refer to Section – SOIL PREPARATION, Article Soil Testing for requirements."
- 2.24 Part 3, Execution, Article 3.05 BMP Inspection and Maintenance. Insert the following new subparagraphs 3.05,A.2 and 3.05,A.3:
"2. Inspections as described shall be performed by the Contractor with observation by the Vegetation Superintendent.
3. All maintenance and reporting shall be performed by the Contractor."
- 2.25 Part 3, Execution, Article 3.05 BMP Inspection and Maintenance, subparagraph B.3.b. Change ponding period from "72 hours" to "48 hours".
- 2.26 Part 3 Execution, Article 3.05 BMP Inspection and Maintenance, Par. B.5.a. Insert the following subparagraph B.5.a,1).
"1) LBA application at bioretention BMPs is a one-time spot treatment at the time of planting for the first year of establishment; refer to Section – EXTERIOR PLANTS."
- 2.27 Part 3, Execution, Article 3.05 BMP Inspection and Maintenance; Par. B.6 subparagraph B.6.a. Substitute the revised subparagraph B.6.a as follows:
"a. Add mulch as needed to maintain at 3 inch depth."
- 2.28 Part 3, Execution, Article 3.05 BMP Inspection and Maintenance, subparagraph B.7.a. Substitute the following revised sentence "7.a":
"a. Soil Testing –Analyze soil for chemistry, biologicals and pollutant levels."

PLAN REVISIONS:

SHEET BR1.0

- 2.29 Detail 1/BR1.0, Note 7.A. Change reference of call out "20,000 lb. vehicle (H-10)" to "10,000 lb. vehicle (H 5)."
- 2.30 Detail 2/BR1.0, Note 7.A. Change reference of call out "20,000 lb. vehicle (H-10)" to "10,000 lb. vehicle (H 5)."

IRRIGATION DRAWINGS

- 2.31 Irrigation Legend Clarification: The Legend does not include the solid triangle shape shown on the plans. The triangle shape represents the (9) 1" Rainbird quick coupler valves, Model 44RC; refer to Sheets IR1.0, IR1.1, and IR1.2, and 9/IR1.3.

L-1 SERIES, HARDSCAPE PLAN ENLARGEMENTS

- 2.32 Keyed Note 48, Emergency Tower
 - 1. Provide two-units per specification Section – SOLAR CELLULAR EMERGENCY TOWER.
 - 2. Locate units in field as to be determined by the Owner and Landscape Architect.
 - a. One unit adjacent Picnic Area.
 - b. One unit adjacent drinking fountain located adjacent Monument Plaza.
- 2.33 Keyed Note 49: Delete Keyed Note 49; 2-security cameras are incorporated with the Solar Cellular Emergency Towers.

QUESTIONS FROM PROSPECTIVE BIDDERS:

- 1. Unit prices schedule does not identify any quantities, typically, in the Form 024, the quantities are included. Is bidder to provide this information?

Response: Project is a lump sum bid and as such quantities are not included. The unit price schedule does not list all of the tasks necessary to complete the project. The unit prices will be utilized during the course of construction for adds or deletions as may be required by Change Order. To assist bidders in the preparation of their respective bids, refer to Attachment 0.2A, Estimation of Construction Quantities – For Bidder Information Only.

- 2. Can we have a complete bid tab?

Response: See response to Question #1.

3. Can a project schedule be provided for reference? Do you have a project schedule readily available?

Response: No project schedule is available at this time.

4. On sheet G1.0, you state under note 11-"contractor and fabricator shall verify all quantities", however, we have no quantities to verify? Are you going to provide us with quantities to verify?

Response: The provided quantities are for bidder information only. It will be up to the determine their own quantities and provide a lump sum bid.

5. Artist is to design, fabricate, and install monument. Will installation occur prior to substantial completion? If yes, then will artist be responsible for monument until final acceptance?

Response: Yes installation will occur prior to substantial completion and the artist will be responsible for the monument until final acceptance.

6. Bid tab provided does not include all items of work. Bridge, allowances, drinking fountains and alternates to name a few. Will the bid tab be revised to include these missing items? Will this be a lump sum contract?

Response: See response to question #1. Yes, this will be a lump sum contract.

7. Why such a short contract time? Can the contract time be extended?

Response: The contract time has been extended to 180 days calender as per Addendum 1.

8. Are there any SAWS impact fees that the contractor will have to pay?

Response: Yes, however COSA will setup an allowance for the project permit and impact fees.

9. What are responsibilities of general contractor with the monument installation? Coordination only? Or do we need to install?

Response: The general contractor will not be responsible for the installation of the monument but will be responsible for the construction of the foundation as shown in the plans. However, the contractor will be required to coordinate and work with the Artist to assure that the monument is properly and safely installed/erected.

10. Can an allowance be provided for permits and impact fees? With so many entities involved such as Air Force, CPS, SAWS, Corp of Engineers, City, Bexar county, TCEQ, it would be difficult to accurately estimate these fees.

Response: The COSA will provide an allowance for the project permit and impact fees.

11. We feel that this project should allow for a 270 calendar day work schedule at a minimum to be constructed in a quality and safe manner.

Response: The City has made a decision to extend the project contract time to 180 calender days, if unforeseen circumstances arise during the course of the project the City will consider request for additional time.

12. Can the bid date be pushed back 1 or 2 weeks? This project requires a lot of coordination with sub pricing and take off. We might not be able to get price together by 8/30

Response: The bid opening will be pushed back to 09/13/2016.

13. What is the cross section of the existing concrete channel that needs to be removed? Toe downs? Piers? Etc

Response: The existing configuration of the concrete channel was not available on prior as-builts however our best estimate is that the riprap is approximately 6 inches thick and toe downs are likely 2' in depth and 9 inches in width.

14. Can dirt work quantities be provided including the total cut and fill?

Response: Estimated quantities have been provided as part of this addendum for Bidders Information Only. Embankment and Fill estimated quantities are included.

15. Is site security fence required around the entire site? What type is required?

Response: Security fence is not required around the site. The Contractor will be responsible for securing their own equipment, materials, etc. A staging location will be allowed with the median area and the contractor can choose to provide security fence for the staging area at their cost.

16. Currently there is a large stockpile of asphalt millings on the project site. Will this material be removed by others or will the contractor be required to haul off?

Response: The millings are part of a TxDOT project. COSA staff will assure that the millings are removed prior to the start of construction.



08/24/16

John Hernandez



8/24/16

Larry A. Hicks

END OF ADDENDUM No. 2



City of San Antonio
TRANSPORTATION AND CAPITAL IMPROVEMENTS

RECEIPT OF ADDENDUM NUMBER(S) 2 IS HEREBY ACKNOWLEDGED FOR PLANS AND

SPECIFICATIONS FOR CONSTRUCTION OF THE Lackland Gateway Corridor Project # 23-01455
FOR WHICH BIDS WILL BE OPENED ON September 13, 2016 at 2:00pm

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID
PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

Signature

Print Name/Title

CITY OF SAN ANTONIO

Project Name: Lackland Gateway Corridor
ID NO.: 23-01455-05-02-01

Date Issued: August 3, 2016
Page 1 of 1

The estimated construction budget for this contract is \$4,837,932.00

020 BID FORM

Legal Name of Company (print)

I. BASE BID

Total Amount of Base Bid Insert Amount in Words and Numbers):

\$

II. ALTERNATES

Amount of each Alternates (if applicable) insert in Numbers:

Additive Alternate #1 - **Extended One (1) Year Landscape Maintenance Period**

Total Amount of Bid for Additive Alternate #1:

\$

Person Authorized to Sign Bid/Contract (Print)

Title of Person Signing

Address

Fax No.

City, State and Zip Code

Local Headquarters
 Local Branch Office

(Check one)

Telephone No.

E-mail Address

Name of the proposed **Project Manager**: _____

Name of the proposed **Site Superintendent**: _____

CITY OF SAN ANTONIO
024 UNIT PRICING FORM

PROJECT NAME: Lackland Gateway Corridor
PROJECT NO. 23-01455

ALT. NO.	DESC. CODE	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE
		The City only will accept bid pricing to the hundredths. Any pricing extended out to three decimal points will be truncated to two decimal points in the City's favor.			
	1	Remove concrete curb	L.F.	1	
	2	Remove miscellaneous concrete	S.F.	1	
	3	Remove concrete pipe	L.F.	1	
	4	Channel excavation (150 c.y. < x < 5,000 c.y.)	C.Y.	1	
	5	Embankment (final) (ordinary compaction) (type A)	C.Y.	1	
	6	Concrete structure (abutments and wingwalls)	C.Y.	1	
	7	Controlled low strength backfill	C.Y.	1	
	8	Reinforced concrete pipe (class III)(24" diameter)	L.F.	1	
	9	Split conduit cap (ATT & Level 3)	L.F.	1	
	10	SAWS concrete saddle cap	C.Y.	1	
	11	12" PVC sanitary sewer line	L.F.	1	
	12	Sanitary sewer manhole (0 - 6')	EA	1	
	13	Extra depth manholes (>6')	V.FT.	1	
	14	Concrete curb and gutter	L.F.	1	
	15	Conc curb (type F)	L.F.	1	
	16	Conc curb & gutter (armor curb)	L.F.	1	
	17	Concrete sidewalks (1,000 sy < x < 10,000 sy)	S.Y.	1	
	18	Special finish concrete; rock salt	S.F.	1	
	19	Sidewalk drain	EA	1	
	20	Portland cement concrete driveways - commercial	S.Y.	1	
	21	Concrete riprap (5" thick)	S.Y.	1	
	22	Concrete traffic barrier (portable) (low profile concrete barrier) (type i)	L.F.	1	
	23	Concrete traffic barrier (portable) (low profile concrete barrier) (type ii)	L.F.	1	
	24	Wheel stops	EA	1	
	25	Handicap sign	EA	1	
	26	Handicap pavement marking	EA	1	
	27	4 inch wide yellow line (< 100,000 lf)	L.F.	1	
	28	4 inch wide white line (< 30,000 lf)	L.F.	1	
	29	Rock filter dams (install/remove) (type 3)	L.F.	1	
	30	Construction exits (install & remove)	S.Y.	1	
	31	Temporary sediment control fence	L.F.	1	
	32	Curb inlet gravel filters	L.F.	1	
	33	Site wall Type 1 - Cast in place concrete retaining wall	C.Y.	1	
	34	Site wall Type 2 - Natural boulder retaining wall	S.F.	1	
	35	Landscape walls Type 3	S.F.	1	
	36	Landscape walls Type 4	S.F.	1	

CITY OF SAN ANTONIO
024 UNIT PRICING FORM

ADDENDUM NO. 2
Attachment 02.B

PROJECT NAME: Lackland Gateway Corridor
PROJECT NO. 23-01455

ALT. NO.	DESC. CODE	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE
	37	Formliner textured concrete wall finish	S.F.	1	
	38	Natural stone curb edging	L.F.	1	
	39	Salvaged concrete paving with decomposed granite joint infill	S.F.	1	
	40	Stepping boulders (2' x 3') @ LID BMP 3	EA	1	
	41	Concrete seat wall at picnic area (18" ht x 24" width)	L.F.	1	
	42	Concrete circular bench - 3' diameter at picnic area	EA	1	
	43	Concrete circular bench - 6' diameter at nodes	EA	1	
	44	Guardrail with handrail	L.F.	1	
	45	Guardrail with handrail and lighting	L.F.	1	
	46	Handrail extension	L.F.	1	
	47	Protective rail	L.F.	1	
	48	Protective rail with concrete mow strip	L.F.	1	
	49	Fixed bollard Type 1	EA	1	
	50	Removable bollard Type 2	EA	1	
	51	Paver Type 1	S.F.	1	
	52	Paver Type 2	S.F.	1	
	53	Paver Type 3	S.F.	1	
	54	Compacted Aggregate Base at Pavers	C.Y.	1	
	55	10" Nyloplast drains	EA	1	
	56	8" drain line	L.F.	1	
	57	Painting; Tnemec 3 part system	S.F.	1	
	58	Anti-graffiti coating	S.F.	1	
	59	ADA parking sign	EA	1	
	60	Interpretive Panel Support Stand	EA	1	
	61	Interpretive Graphic Panel (2'-8" x 3'-6")	EA	1	
	62	Mutt mitt dispenser	EA	1	
	63	Ash urn	EA	1	
	64	Bench	EA	1	
	65	Bicycle rack	EA	1	
	66	Waste Receptacles Litter and Recycling	EA	1	
	67	Irrigation Control Valve; 1" size	EA	1	
	68	Irrigation Control Valve- Drip Zone; 1" size	EA	1	
	69	Quick Coupler Valve	EA	1	
	70	Tree Bubbler Assembly	PER TREE	1	
	71	Drip Irrigation	100 S.F.	1	
	72	Temporary Irrigation	<10K S.F.	1	

CITY OF SAN ANTONIO
024 UNIT PRICING FORM

PROJECT NAME: Lackland Gateway Corridor
PROJECT NO. 23-01455

ALT. NO.	DESC. CODE	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE
	73	Temporary Irrigation	<100K S.F.	1	
	74	Temporary Irrigation	>100K S.F.	1	
	75	Trenching and backfill including sand envelope; 18" depth	L.F.	1	
	76	Trenching and backfill including sand envelope; 36" depth	L.F.	1	
	77	1/2" sch 40 PVC	L.F.	1	
	78	3/4" sch 40 PVC	L.F.	1	
	79	1" sch 40 PVC	L.F.	1	
	80	1 1/4" sch 40 PVC	L.F.	1	
	81	1 1/2" sch 40 PVC	L.F.	1	
	82	2" sch 40 PVC	L.F.	1	
	83	2 1/2" sch 40 PVC	L.F.	1	
	84	4" sch 40 PVC	L.F.	1	
	85	Single conductor copper wire with 4/64" PVC insulation	L.F.	1	
	86	Two conductor tinned copper wire with 4/64" PVC insulation	L.F.	1	
	87	Native seed mix (broadcast); Drainfield Mix	100 S.F.	1	
	88	Native seed mix (broadcast); Habiturf	100 S.F.	1	
	89	Native seed mix (broadcast); Butterfly Seed Mix	100 S.F.	1	
	90	Native seed mix (broadcast); Native Trail Mix	100 S.F.	1	
	91	Native seed mix (broadcast); Modified Urban Clay Mix	100 S.F.	1	
	92	Native seed mix (broadcast); Riparian Resoration Seed Mix	100 S.F.	1	
	93	Cool Season Grass; Cereal Rye Grain	100 S.F.	1	
	94	Native grasses / perennial plantings (1 gallon)	EA	1	
	95	Native grasses / perennial plantings (3 gallon)	EA	1	
	96	Native grasses / perennial plantings (5 gallon)	EA	1	
	97	Shrubs (1 gallon)	EA	1	
	98	Shrubs (3 gallon)	EA	1	
	99	Shrubs (5 gallon)	EA	1	
	100	Tree (2" caliper)	EA	1	
	101	Tree (30 gallon)	EA	1	
	102	Tree stakes	PER TREE	1	
	103	Density Buffalo (solid sod)	S.Y.	1	
	104	Density Buffalo (strip)	L.F.	1	
	105	Planting Bed Soil	C.Y.	1	
	106	Prepared Soil	C.Y.	1	
	107	Top Dressing	S.Y.	1	
	108	Fine grading	C.Y.	1	

CITY OF SAN ANTONIO
024 UNIT PRICING FORM

ADDENDUM NO. 2
Attachment 02.B

PROJECT NAME: Lackland Gateway Corridor
PROJECT NO. 23-01455

4

ALT. NO.	DESC. CODE	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE
	109	Cobble; 4" - 6" size range	C.Y.	1	
	110	Cobble; 6" - 12" size range	C.Y.	1	
	111	Aggregate mulch ; 1" - 3" size range	C.Y.	1	
	112	Protection Hydromulch Slurry; 3,000 #'s minimum per acre	100 S.F.	1	
	113	Protection Hydromulch Slurry; 3,500 #'s minimum per acre	100 S.F.	1	
	114	Protection Hydromulch Slurry; 4,000 #'s minimum per acre	100 S.F.	1	
	115	Erosion Control Wattle	13 L.F.	1	
	116	Erosion Control Blanket	S.Y.	1	
	117	Soil Separation/Weed Barrier Fabric	S.Y.	1	
	118	Hardwood Mulch (double shredded)	C.Y.	1	
	119	Bioretention Infiltration Media	C.Y.	1	
	120	Graded Aggregate Choker Stone	C.Y.	1	
	121	Geotextile Separation Layer	S.Y.	1	
	122	Impervious Bioretention Liner (Hydraulic Restriction Layer)	S.Y.	1	
	123	Bioretention Mulch (triple shredded)	C.Y.	1	
	124	Graded Aggregate Soil Media Barrier	C.Y.	1	
	125	Bioretention Underdrain piping	L.F.	1	
	126	Underdrain Cleanout	EA	1	
	127	Cross Vane Rocks / Boulders	TON	1	
	128	Riffle Grade Control Bed Stability Mix	C.Y.	1	
	129	Type A light fixture	EA	1	
	130	Type B light fixture	EA	1	
	131	Type C light fixture	EA	1	
	132	Type D light fixture	EA	1	
	133	Type F light fixture	EA	1	
	134	Type G light fixture	EA	1	
	135	Type H light fixture	EA	1	
	136	Type J light fixture	EA	1	
	137	1" PVC conduit	100 L.F.	1	
	138	2" PVC conduit	100 L.F.	1	
	139	3" PVC conduit	100 L.F.	1	
	140	4" PVC conduit	100 L.F.	1	
	141	#12 THHN/THHW conductor	100 L.F.	1	
	142	#10 THHN/THHW	100 L.F.	1	
	143	#8 THHN/THHW	100 L.F.	1	
	144	#6 THHN/THHW	100 L.F.	1	
	145	Greater Footing Depth - 18" Diameter Shaft	L.F.	1	
	146	Greater Footing Depth - 24" Diameter Shaft	L.F.	1	
	147	Greater Footing Depth - 30" Diameter Shaft	L.F.	1	

LACKLAND CORRIDOR GATEWAY - PROJECT # WBS 23-01455
ESTIMATION of CONSTRUCTION QUANTITIES



FOR BIDDER INFORMATION ONLY

ITEM No.	DESCRIPTION	UNITS	QTY	REMARKS
EARTHWORK				
	REMOVE CONCRETE CURB	L.F.	121	
	REMOVE MISCELLEANOUS CONCRETE	S.F.	28,514	
	REMOVE CONCRETE PIPE	L.F.	20	
	CHANNEL EXCAVATION (150 C.Y. < X < 5,000 C.Y.)	C.Y.	8,810	
	EMBANKMENT (FINAL) (ORD COMP) (TY A)	C.Y.	20,000	
CONCRETE & CONCRETE STRUCTURES				
	CONCRETE STRUCTURE (ABUTMENTS AND WINGWALLS)	C.Y.	33	
	CONCRETE STRUCTURE (PED BRIDGE DECK)(6" DEPTH)	C.Y.	27	
	CONCRETE STRUCTURE (MISC)(MONUMENT SLAB)	C.Y.	249	
	CONCRETE STRUCTURE (MISC)(OVERLOOKS)	C.Y.	34	
	DRILLED SHAFTS (24")	L.F.	1,470	
	DRILLED SHAFTS (30")	L.F.	70	
STORM SEWERS & UTILITIES				
	REINFORCED CONCRETE PIPE (CLASS III)(24" DIA)	L.F.	122	
	SPLIT CONDUIT (ATT & LEVEL 3)	L.F.	1,050	
	SAWS CONCRETE SADDLE CAP	C.Y.	17	
	12" PVC SANITARY SEWER LINE	L.F.	326	
	SANITARY SEWER MANHOLE (0 - 6')	EA.	2	
	EXTRA DEPTH MANHOLES (>6')	V.F.	6	
MISCELLANEOUS CONSTRUCTION				
	CONCRETE CURB AND GUTTER	L.F.	1,060	
	CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY)	S.Y.	1,735	
	SIDEWALK DRAIN	EA.	3	
	PORTLAND CEMENT CONCRETE DRIVEWAYS - COMMERCIAL	S.Y.	2,352	
	CONCRETE RIPRAP (5" THICK)	S.Y.	5	
	WHEEL STOPS	EA.	19	
	CONC CURB (TY F1)	L.F.	223	
	CONC CURB & GUTTER (ARMOR CURB)	L.F.	12	
	HANDICAP SIGN	EA.	2	
	4 INCH WIDE YELLOW LINE (< 100,000 LF)	L.F.	632	
	4 INCH WIDE WHITE LINE (< 30,000 LF)	L.F.	306	
	HANDICAP PAVEMENT MARKING	EA.	2	
	ROCK FILTER DAMS (INSTALL/REMOVE) (TYPE 3)	L.F.	120	
	CONSTRUCTION EXITS (INSTALL & REMOVE)	S.Y.	443	
	TEMPORARY SEDIMENT CONTROL FENCE	L.F.	584	
	CURB INLER GRAVE FILTERS	L.F.	20	
HARDSCAPE & SITE FURNISHINGS				
	PEDESTRIAN BRIDGE	L.F.	180	
	ASSEMBLE AND PLACE PEDESTRIAN BRIDGE	EA.	2	
	STEPPING BOULDERS (2' X 3') @ LID BMP 3	EA.	25	
	SITE WALL TYPE 1 - CAST IN PLACE CONCRETE RETAINING WALL	C.Y.	414	
	FORMLINER TEXTURED CONCRETE WALL FINISH	S.F.	1,656	
	SITE WALL TYPE 2 - NATURAL BOULDER RETAINING WALL	S.F.	5,432	
	NATURAL STONE CURB EDGING	L.F.	582	
	SALVAGED CONCRETE SURFACE WITH DECOMPOSED GRANITE JOINT INFILL	S.F.	282	
	LANDSCAPE WALLS - TYPE 3	L.F.	250	
	LANDSCAPE WALLS - TYPE 4	L.F.	100	
	BICYCLE RACK	EA.	2	
	WASTE RECPTACLES - LITTER & RECYCLING	EA.	4	
	CONCRETE SEAT WALL AT PICNIC AREA (18" HT X 24" WIDTH)	L.F.	20	
	CONCRETE CIRCULAR BENCH - 3' DIAMETER @ PICNIC AREA	EA.	4	
	CONCRETE CIRCULAR BENCH - 6' DIAMETER @ NODES	EA.	3	

ITEM No.	DESCRIPTION	UNITS	QTY	REMARKS
	GUARD RAIL - WITH HANDRAIL	L.F.	270	
	PROTECTIVE RAIL	L.F.	230	
	PORTALET ENCLOSURE	EA.	1	
	SHADE STRUCTURE @ PICNIC/RESTROOM AREA	EA.	1	
	FIXED BOLLARD - TYPE 1	EA.	6	
	REMOVABLE BOLLARD - TYPE 2	EA.	6	
	MUTT MITT DISPENSER	EA.	2	
	ASH URN	EA.	2	
	PAVER TYPE 1	S.F.	4,200	
	PAVER TYPE 2	S.F.	300	
	PAVER TYPE 3	S.F.	231	
	BENCH	EA.	3	
	CONCRETE PICNIC TABLES AND BENCH	EA.	2	
	MANUAL SWING GATE AND LOCK	EA.	1	
	10" NYOPLAST DRAINS	EA.	6	
	8" DRAIN LINE	L.F.	65	
	SPECIAL FINISH CONCRETE - ROCK SALT	S.F.	2,400	
	PAINTING; TENMEC 3 PART SYSTEM	S.F.	8,628	
	ANTI-GRAFFITI COATING	S.F.	2,926	
SIGNAGE				
	ADA PARK SIGN - STEEL	EA.	2	
	GRAPHIC SIGN PANELS @ NODES AND BMPs	EA.	5	
	ENTRY SIGN @ SW MILITARY	EA.	1	
	BUS PARKING SIGN - MOUNTED ON LIGHT POLE	EA.	1	
	PARKS ORDINANCE SIGN	EA.	1	
IRRIGATION/ PLUMBING				
	WATER METER - TAP 1" Includes meter & SAWS impact fees	EA.	1	
	WATER METER - TAP 1.5" Includes meter & SAWS impact fees - SITE IRRIGATION	EA.	1	
	DRIP IRRIGATION - PLANTING BEDS	S.F.	6,215	
	BACKFLOW PREVENTER W/XL VAULT (2")	EA.	1	
	MAINLINE - 2"	LF	1,900	
	CONTROLLER & 1 1/2" MASTER VALVE	EA.	1	
	QUICK COUPLER VALVES	EA.	9	
	PAVEMENT SLEEVING	L.F.	400	
	TREE BUBBLERS (2 PER TREE) PRICE PER TREE	EA.	161	
	TEMP IRRIGATION - LID BASIN	S.F.	31,226	
	TEMP IRRIGATION - SITE	S.F.	190,436	
	DRINKING FOUNTAIN	EA.	2	
	DOMESTIC WATER SUPPLY LINE	L.F.	650	
	DRINKING FOUNTAIN DRAIN LINE WITH SWING CHECK VALVE	L.F.	100	
PLANTING				
	NATIVE SEED MIX -BROADCAST -Drainfield Mix	S.F.	4,133	
	NATIVE SEED MIX -BROADCAST - RIPARIAN RESTORATION SEED MIX	S.F.	29,499	
	NATIVE TURFGRASS - MODIFIED URBAN CLAY SEED MIX	S.F.	43,185	
	NATIVE TURFGRASS - HABITURF SEED MIX	S.F.	30,357	
	NATIVE BUTTERFLY SEED MIX	S.F.	1,002	
	NATIVE TRAIL MIX	S.F.	12,120	
	NATIVE GRASSES / PERENNIAL PLANTINGS, BMPs (1 GALLON)	EA.	2,028	
	NATIVE GRASSES / PERENNIAL PLANTINGS, BMPs (3 GALLON)	EA.	299	
	NATIVE GRASSES / PERENNIAL PLANTINGS, BMPs (5 GALLON)	EA.	77	
	NATIVE GRASSES / PERENNIAL PLANTINGS, MONUMENT PLAZA (3 GALLON)	EA.	58	
	NATIVE GRASSES / PERENNIAL PLANTINGS, MONUMENT PLAZA (5 GALLON)	EA.	128	
	NATIVE GRASSES / PERENNIAL PLANTINGS, SITE (1 GALLON)	EA.	861	
	NATIVE GRASSES / PERENNIAL PLANTINGS, SITE (3 GALLON)	EA.	172	
	NATIVE GRASSES / PERENNIAL PLANTINGS, SITE (5 GALLON)	EA.	164	
	2" CAL TREES	EA.	76	
	30 GALLON TREES	EA.	85	
	TREE STAKES - 3 PER TREE	EA.	161	
	BUFFALO DENSITY SODDING	S.Y.	2,070	
	90 DAY MAINTANENCE	MO	3	
	SOIL AMENDMENTS - SUBGRADE BIOLOGICALS	S.Y.	138,923	
	SOIL AMENDMENTS - BIOLOGICALS	S.Y.	138,923	

ITEM No.	DESCRIPTION	UNITS	QTY	REMARKS
	PLANTING BED SOIL - 12" DEPTH, FOUR WAY MIX	C.Y.	295	
	TURF SOIL MIX - 6" DEPTH, PREPARED TOPSOIL	C.Y.	3,088	
	FINE GRADING - SITE, EXCLUDES BMPs	S.F.	145,511	
	BLANCO COBBLE AGGREGATE, 75% 4-6" + 25%6-12" - SITE, EXCLUDING BMPs	C.Y.	20	
	BLANCO AGGREGATE, 1"-3"	C.Y.	35	
	HYDROMULCH SLURRY COVER - SEEDLESS	S.Y.	120,296	
	EROSION LOGS-Terra Tubes	L.F.	1,370	
	EROSION CONTROL BLANKET	S.Y.	1,680	
	WEED BARRIER FABRIC	S.F.	2,630	
	HARDWOOD MULCH - PLANTING BEDS, EXCLUDES BMPs	C.Y.	72	
	HARDWOOD MULCH - TREE PLANTINGS	C.Y.	30	
LIGHTING/ ELECTRICAL				
	POLE BASES (DRILLING, CONCRETE, ETC)	L.S.	1	
	TRENCHING (6x24") (TRENCH, BACKFILL, COMPACTION)	LF	2,625	
	PARKING LIGHTING PACKAGE - LED	EA.	3	
	MONUMENT LIGHTING PACKAGE - LED, DIMMABLE, RGBW	EA.	10	
	WALKWAY POLE LIGHTING - LED	EA.	20	
	WALKWAY BRIDGE LIGHTING - LED	EA.	54	
	WALKWAY RAIL LIGHTING - LED	EA.	24	
	BOLLARD LIGHTS - LED	EA.	11	
	SOLAR EMERGENCY CALL BOX	EA.	2	
	PEDESTAL OUTDOOR CHARGING STATION	EA.	1	
LOW IMPACT DEVELOPMENT BMPs				
	HIGH FLOW BYPASS STRUCTURE	EA.	4	
	FINE GRADING	S.F.	5,667	
	BIORETENTION SOIL MEDIA	C.Y.	550	
	SOIL MEDIA BARRIER	C.Y.	70	
	UNDERDRAIN PIPE	L.F.	590	
	HARDWOOD MULCH - BMPs	C.Y.	72	
	30 MIL PVC LINER - HYDRAULIC RESTRICTION LAYER	S.F.	6,200	
	DRAINAGE STONE (WASHED NO. 57)	C.Y.	200	
	GEOTEXTILE SOIL SEPARATOR FABRIC	S.F.	4,500	
	STONE SLOPE PROTECTION (CHUTE)	S.F.	430	
	CLEANOUT	EA.	9	
	ROCK RIPRAP (8 IN TYPE F STONE)	C.Y.	320	
	STREAM RESTORATION	L.F.	550	
	STONE FOREBAY AT SIDEWALK DRAIN - 6" depth with 4-6" river cobble	C.Y.	10	

SECTION 26 56 30
SOLAR/CELLULAR EMERGENCY TOWER

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solar / Cellular Emergency Tower.

1.02 RELATED SECTIONS

- A. Division 01: Administrative, procedural, and temporary work requirements.
- B. Section 03 33 00, Cast-In-Place Concrete.
- C. Section 32 16 00, Site Concrete, Curbs, Gutters, and Sidewalks.

1.03 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Indicate tower locations, mounting, and attachment.
 - 2. Product Data: Include product description, materials, finishes, and performance characteristics.
 - 3. Installation instructions.

1.04 WARRANTY

- A. See Section 01 78 00 - Close Out Submittals, for additional warranty requirements.
- B. Include manufacturer's warranty.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Store tower in dry location until installed.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Rath Security; contact Rob Tschimperle, Sales Manager, N56 W24720 N. Corporate Circle, Sussex, WI 53089; 1-866-850-8854 ext. 125; rtschimperle@bmgmail.com.
 - 1. Phone Tower
 - a. Model 2100-TSC34.
 - b. Housing: 9' height x 10.75" wide x 6" depth (height with solar array panel = 11'-11").
 - 1) Constructed with 11 gauge power-coated steel (inside and out) to be painted "Red Letter" red in color, with 4" white block lettering spelling out "EMERGENCY" on all four sides of unit housing.
 - c. 85 watt solar, with cellular, red strobe beacon and photocell.
 - d. Must also be ADA compliant, and have the following features:
 - 1) Call assurance LED, calls up to 5 phone numbers, "location message" capability, remote or on-site programmable, recessed illuminated faceplate.
 - 2) 2-year minimum warranty.
 - 3) Cellular - GSM and CDMA
 - e. Power Source: Solar Array Panel constructed with a high-efficiency photovoltaic module containing an STC power rating of 85 watts, Silicon Nitride (SiN) coating, high transmission tempered glass and completely sealed in a reinforced anodized aluminum frame, with a performance tolerance of +/-5%. Panel shall be approximately 1007mm x 652mm in size, and weight should be no more than 21 lbs.
 - 2. Tower Mounting Hardware - Model 7476.
 - 3. Dome Camera (to be attached to Phone Tower Housing).
 - a. 360 degree fixed view camera with 2MP (1600 x 1200 pixels), at minimum, and containing the following minimum features and specifications:
 - 1) Ability to be hard-mounted on camera arm or surface mounted in field with appropriate mounting kit included in proposal.

- 2) Must have choice of continuous stream, "upon-station-activation", or motion sensor operation capability. Must contain, at minimum, 32GB SD storage card capability or DVR device, with up to 65GB SD/SDHC for local storage.
- 3) Vandal and weatherproof camera housing, to be installed on included camera pole and mounted above the top of the phone tower housing and below the solar array panel.
- 4) 360 degree view.
- b. Protocols: TCP/IP, HTTP, DHCP, DNS, RTP/RTCP, PPPoE (FTP, SMTP, NTP, SNMP)
- c. Connection: RJ45 10M/100M self-adaptive Ethernet port and RS-485 interface.
- d. Power: 24vac, 12 vdc, or PoE.
 - 1) Power consumption 4W maximum.
- e. Motion sensing recording option.
4. Refer to manufacturer's product specifications at the end of this section.
5. Contractor will assist San Antonio Parks and Recreation with the set-up of the phone service through the preferred service provided of San Antonio Parks and Recreation. Cell phone service will be in the name of San Antonio Parks and Recreation and will be billed directly to San Antonio Parks and Recreation.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install tower in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Set tower plumb, level and rigid.
- C. Orient solar panel per optimum conditions.
- D. Anchor tower securely to supporting construction.
 1. Coordinate installation of concrete footing and paving.

3.02 SYSTEM INSTRUCTIONS

- A. Instruction Session: After system is installed, inspected and approved, conduct a training session for Owner in the operation and general maintenance of the system.

3.03 PROTECTION

- A. Protect installed product until completion of project.
- B. Replace damaged components with new replacements.

END OF SECTION



Solar Powered Emergency Tower Model 2100-TS

Product Specification

1.0 GENERAL DESCRIPTION

- 1.1 The Solar/Cellular Emergency Phone Tower is required to eliminate the need to trench for electrical and phone lines.
- 1.2 The Tower shall be rectangular in appearance and made of continuous steel construction. It shall stand 9' from the base to the top of tower. The word "EMERGENCY" with bright reflective lettering shall be located on all four sides and each letter shall be a minimum of 3" in height. The phone shall be compliant with the American with Disabilities Act (ADA) and be powered with a solar panel accompanied with a battery for power storage.
- 1.3 The Emergency communication component shall comply with the ADA. The phone shall have the ability to be programmed with up to 5 emergency phone numbers. Upon activation of the emergency push button; a call will be automatically placed, the strobe shall instantaneously flash until the call has been disconnected by the called party.

2.0 CONSTRUCTION

- 2.1 The Tower shall be constructed of 11 gauge powder coated hot rolled steel that is weatherproof and manufactured with a weather and corrosion resistant finish.
- 2.2 The Tower is to stand 9' tall from base to top, 10 3/4" wide and 6" deep and all aspects of its construction will be vandal resistant.
- 2.3 The emergency phone plate shall be made of 12 gauge Stainless Steel and be 11 1/4" inches high and 8 1/4" inches wide and will attach to the tower using 6 Stainless Steel screws.
- 2.4 The emergency phone button shall be located approximately 48" above the base to ensure conformance with the ADA requirements.
- 2.5 The Tower must have a Braille faceplate stating 'EMERGENCY PHONE' 'PUSH FOR HELP' to ensure conformance with ADA requirements.





Solar Powered Emergency Tower Model 2100-TS

Product Specification

- 2.6 The base of the Tower shall be 5/8" in thickness, welded to body of tower with 4 built in 1" mounting holes to attach to a concrete mounting pad.
- 2.7 The strobe shall be mounted on an aluminum pipe extension on top of the tower. Strobe will come fully assembled. The extension shall be 30" long.
- 2.8 The strobe electronics access opening shall be 7 1/4" high and 6 3/4" wide and located on the back of the tower.
- 2.9 Phone electronics and most electrical connections must be housed in a NEMA 4 enclosure within the Tower.
- 2.10 The Tower shall have a rear access panel located on the back of the tower, directly behind the phone plate. The panel provides access to the electrical and phone connections.
- 2.11 The Tower must have a rear access door located less than 2 feet above ground to allow for solar battery installation and maintenance.

3.0 MOUNTING

- 3.1 The Tower is constructed of steel that is of one continuous piece with a welded internal base 5/8" thick containing four built in mounting holes. A template for installing the anchor bolts is to be included. The unit shall be mounted on a concrete pad with 3/4" galvanized anchor bolts, galvanized nuts and washers (available for purchase Rath #7476 or #7477).
- 3.2 Solar panel is to be mounted at the top of the Tower, affixed to the 30" aluminum extension below the strobe. It shall be at least 85 WATTS and not to exceed 130 WATT. A mounting bracket is provided.

4.0 ELECTRICAL

- 4.1 The phone shall be powered by a solar panel along with a 90 amp hour battery for energy storage.
- 4.2 The power consumption cannot exceed 2.5 amps with a fully active phone, cellular unit, strobe, beacon, faceplate LED and power supply.





Solar Powered Emergency Tower Model 2100-TS

Product Specification

5.0 LIGHTS

- 5.1 The dual element light shall be located at the top of the Emergency Phone Tower. The light shall contain a strobe and a constant-on beacon.
- 5.2 The strobe shall be activated upon pushing of the emergency phone button. It shall have an LED cluster and flash at a rate of a minimum of 60 flashes per minute.
- 5.3 The beacon shall provide continuous, steady illumination and will utilize an LED cluster as its light source.
- 5.4 A Photocell shall be offered as an option to allow for the deactivation of the beacon during daylight hours.
- 5.5 A single element strobe shall be offered as an option. The strobe shall be activated upon pushing of the emergency phone button.
- 5.6 Strobes must also be available in custom colors.

6.0 COMMUNICATIONS

- 6.1 The unit shall have an ADA compliant and vandal resistant speaker phone.
- 6.2 The phone shall be a push once to talk phone. Once the button has been pushed, the phone will call programmed emergency numbers. The phone must be capable of being programmed with up to 5 emergency numbers.
- 6.3 The phone shall have Location Message capability. Phone must have a minimum 18 second recordable message capability programmable to play once, twice, or continuously until * is pressed by called party. Phone shall notify called party of the location of the call upon being received at the emergency dispatch center.
- 6.4 Phone shall be capable of allowing the called party to replay the phone location message if necessary to ensure an understanding of the location of phone tower.



Solar Powered Emergency Tower Model 2100-TS

Product Specification

- 6.5 Once call has been made (button pushed), the call can only be terminated by the called party.
- 6.6 Phone plate must have a red LED that will light up upon push of the button. The light shall be a solid color when the phone is activated and will flash when call has been answered.
- 6.7 The speakerphone must be capable of being programmed and reprogrammed on-site at the Tower. Line powered phones and Dip Switch programming are not acceptable.
- 6.8 The phone must have a built in phone line consolidator feature. Phones must be capable of sharing phone lines with up to 10 Rath Security SmartPhones if required by end user to reduce operational cost.
- 6.9 Communication options must include: analog, VoIP, WIFI VoIP, Cellular (both CDMA & GSM), 900 mhz, and 2-way radios.
- 6.10 Standard Phone features:
 - Programmable with up to 5 emergency phone numbers
 - Weatherproof speaker
 - Weatherproof microphone
 - Operating Temperature of between -40°F to +150°F (-40° to + 65°C)
 - Programmable passwords
 - On-Site or Remote Programmable
 - EEPROM memory to protect programming
 - Adjustable speaker and microphones levels
 - Programmable location message with human voice recognition
 - Programmable conversation time
 - 2 Button – 2 Number capability
 - Remote and on-site diagnostic testing
 - Ability to control additional accessories (cameras, speakers)



Solar Powered Emergency Tower Model 2100-TS

Product Specification

7.0 FINISH

- 7.1 Unit shall be powder coated white with a weatherproof and corrosion resistant finish. End user must be capable of requesting custom colors.
- 7.2 Unit must be UV resistant.

8.0 GRAPHICS

- 8.1 All wording shall be made of highly reflective vinyl lettering.
- 8.2 The standard text such as "EMERGENCY" shall be available in blue with each letter to be a minimum of 3" in height to meet ADA.
- 8.3 Text shall be available in custom colors upon request.

9.0 OPTIONS

- 9.1 Tower shall be available with custom colors, lettering, and faceplate engraving per customer's request.
- 9.2 Wireless Communication options shall include Cellular, WIFI VoIP, 900mhz, and 2-way radio.
- 9.3 Both Dome cameras and 'pinhole' camera options must be available from manufacturer. Wireless cameras must be capable of storing data on a 32G SD card or larger.





Solar Powered Emergency Tower Model 2100-TS

Product Specification

10.0 WARRANTY

10.1 The unit shall be warranted against factory defects for a period of two years.

11.0 MANUFACTURER

The manufacturer shall be:
Rath Security
N56 W24720 North Corporate Circle
Sussex, WI 53089
866-850-8854
Website: www.rathsecurity.com



Made in the USA
2 Year Warranty

N56 W24720 N. Corporate Circle · Sussex, WI 53089
866-850-8854 · 262-246-4828 (fax) · www.rathsecurity.com

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Ver: 4



Dome Cameras

Rath's Dome Cameras provide a clear 360° view. These cameras can be mounted above or near an emergency phone location to help identify the caller and to better understand event details.

Specifications (Fixed View):

- 2MP (1600 x 1200 pixels)
- Hard mounted on camera arm or surface mounted in field (with kit number RP6800100B)
- Continuous stream, upon station activation, or motion sensor
- Send to video monitor, DVR device, or store locally on 32G SD card
- Vandal and weatherproof housing
- 360° view
- Excellent day and night video
- Protocols: TCP/IP, HTTP, DHCP, DNS, RTP/RTCP, PPPoE (FTP, SMTP, NTP, SNMP)
- Connection: RJ45 10M/100M self-adaptive Ethernet port and RS-485 interface
- Power: 24 vac, 12 vdc, or PoE
- Power consumption: 4W maximum
- 3.08 lbs
- Motion sensing option
- Up to 64 GB SD/SDHC card for local storage



~~Specifications (PTZ):~~

- ~~• 1.3MP (1280 x 960 pixels)~~
- ~~• Hard mounted on camera arm or surface mounted in field (with kit number RP6800100B)~~
- ~~• Continuous stream or upon remote station activation~~
- ~~• Send to video monitor or DVR device~~
- ~~• Vandal and weatherproof housing~~
- ~~• 360° endless view~~
- ~~• Adjustable rotation speed~~
- ~~• Manual rotation or preset patterns~~
- ~~• Excellent day and night video~~
- ~~• Protocols: TCP/IP, HTTP, DHCP, DNS, RTP/RTCP~~
- ~~• Connection: RJ45 10Base-T/100Base-TX Ethernet port and RS-485 interface~~
- ~~• Power: 24 vac~~
- ~~• Power Consumption: 15W maximum~~
- ~~• 11.02 lbs.~~



07/15

N56 W24720 N. Corporate Circle • Sussex, WI 53089
866-850-8854 • 262-246-4828 (fax) • www.rathsecurity.com





HIGH EFFICIENCY PHOTOVOLTAIC MODULE

MODEL : ATI-KC85W



- APPLICATIONS**
- Telecommunication
 - Cathodic protection
 - Water pumping
 - Signaling
 - Rural electrification
 - Private residences
 - Commercial buildings

ATI high efficiency module size is easy to handle and specifically designed to perform in the harshest of environments. The ATI module uses state of the art crystalline technology with a Silicon Nitride (SiN) coating that enhances cell efficiency. Encapsulation beneath high transmission tempered glass is accomplished using an advanced, UV resistant thermal setting plastic. The encapsulant, ethylene vinyl acetate, cushions the solar cells within the laminate and protects the cells from breaking. The rear surface of the module is completely sealed from moisture and mechanical damage by a continuous high strength polymer sheet. The ATI module incorporates a reinforced anodized aluminum frame, designed to meet SOLAR-X High Quality Standards for corrosion resistance.



STC Power Rating	85W @ STC
Maximum Power Voltage (Vpm)	17.6V
Maximum Power Current (Ipm)	4.8A
Open Circuit Voltage (Voc)	21.6V
Short Circuit Current (Isc)	5.2A
Cell Type / # Cells	Multi/MONO / 36Series
Nominal Voltage	12Vdc
Maximum System Voltage	DC 600V
Series Fuse Rating	15A
Performance Tolerance	±5%
Weight	8.9kg / 20LBS

• Limited warranty : 10 years

3930-B Valley Blvd.
Walnut, CA 91789

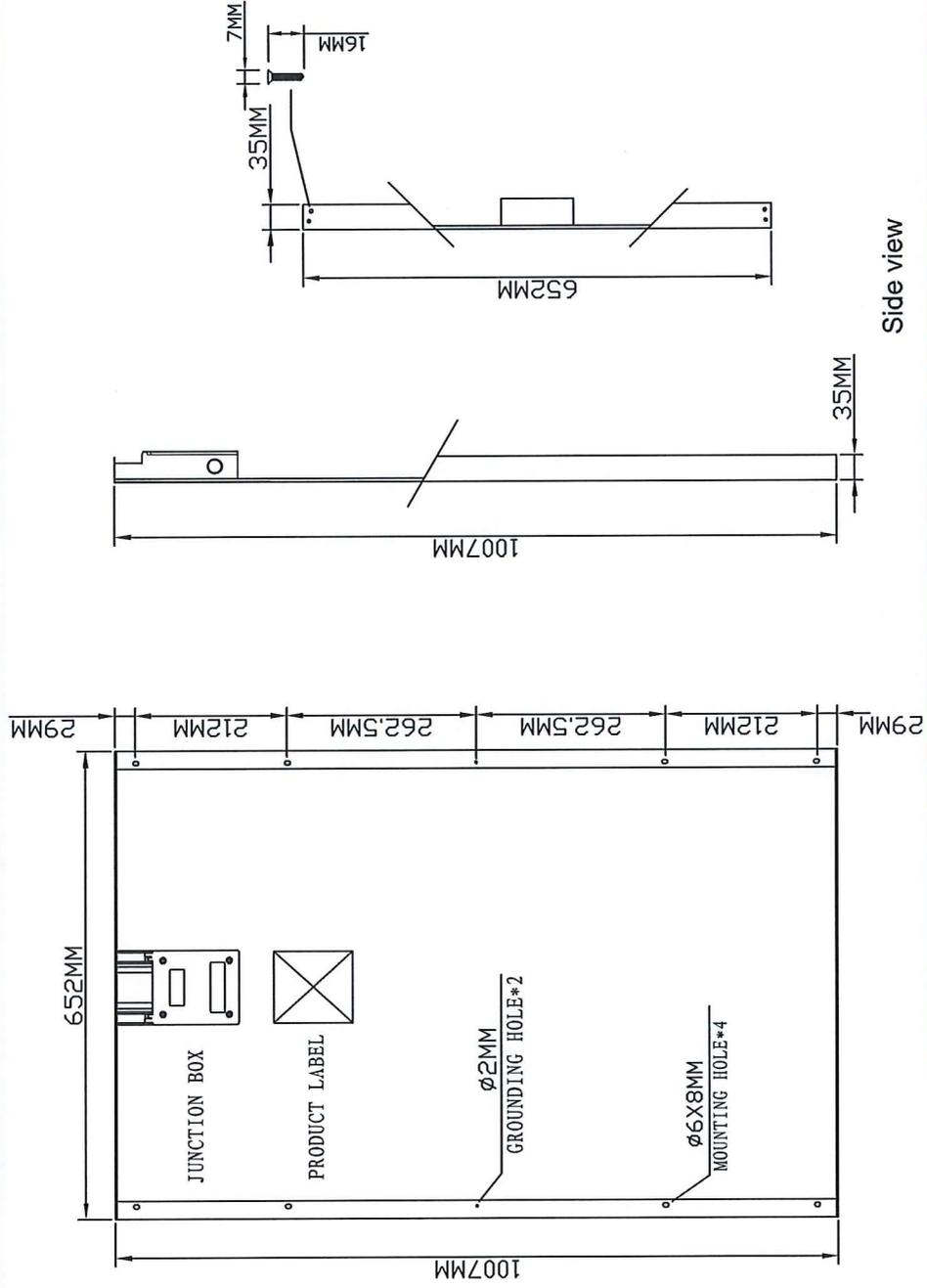
Tel : (909)468-1800
Fax : (909)468-9880

<http://www.alpstechnologyinc.com>



HIGH EFFICIENCY PHOTOVOLTAIC MODULE

MODEL : ATI-KC85W



Side view

• Limited warranty : 10 years

3930-B Valley Blvd.
Walnut, CA 91789

Tel : (909)468-1800
Fax : (909)468-9880

<http://www.alpstechtechnologyinc.com>