Property	City of Norman TMC Design	Dan Baxter	Ron Pati	Kyle Irvin EOR	Nishant Wadje	Sama Khazraeian	Thapa	Will Munshaw	Desi		
In this pagement with control of the	Work Task Description	SP ENG/PM	SR ENG/Lead	Sys Integration.	Electrical/Com m	ITS PE	ITS Engg/CADD	Sr. ITS Engg/CADD		Total	Remark
Table Professional Control Con		Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours		
Part	1. Project Management	24								3	
The Start Principal State Institution State In S	Kick off meeting/Coordination/Centracs Coord	2	2	2		- A	2		24	12	
1	TMC Site Visit /Field Review/Meeting	io	20	×			۰			y,	Kick off Meetings/four
INAL INACURION/DECIDIOR Planement (Noto 1888 contributations) 4.0	Subtotal - Project Management and Meeting	34	34	10	0	л,	10	۱ د	26	110	III berrous ear reserve
Part Description Descrip	2. ITS Analysis							,		,	
Exercical Integrinancia-s (Asiaga Direct, Circula Residual August, Circula Residual August, Circular Marcinical Submit for convenient of all exigences of a sequence of a	Analyze TMC Layout/ITOC placement (two in HR one Reserve)	a	4	.4.	2	2	Ä	1		1	
Communication Designation Control Control di equipment 2	Analyze Electrical Requirements - Voltage Drop, Circuit Breakers, UPS				40			2		42	
External processors in an accuprency of a control processor in a control processo	ITOC Demonstration On-line/Virtual	a,	80	8	1	4	1	1		27	Location TBD
The Chalch Internation Interna	Analyze internal local Area Network and Develop Virtual LAN Document		4	4		. 4	16	16		4	The state of the s
Internical Special conferenciation (Filtra), starters schale, and provided Special Conferenciation (Filtra). Severe Special Conferenciation (Filtra) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Develop CADD/MicroStation Files		4	,		4 4	5 5	16		20	Set in CADD
DETAPOLITY DETAPOLIT	Develop Technical Specifications for iTOC, Server, Software stack	2	D0	4			00 8	00 5		30	and of the
DE MANA/LER Manus DENA/MICES 12	Development iTOC Design/Details/Commissioning Plan		4	2	4	4	12	co		34	
TR Plana (SQN: and Final Signed and Stabel)	Develop RTVM/Test Plan for three ITOCS	2	00	2		E .	8	24		47	Detailed RTVM
111 111 111 112 113	Continues and coat continues bight filler	2	7	2			000			15	
The Pant of Kind Elizable Intelligent and Scale (1) 15 Pant of Kind Elizable (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Subtocal - II 5 Analysis	14	42	30	48	25	126	22	0	369	
Picto Picto Size (Sixe (Sixe (Canada Canada	3 TMC ITS Plans (90% and Final Signed and Sealed)										
DIOCOGETIST PASISION/Wileying/First/Busion (1984) DIOCOGETIST PASISION/Wileying/First/Busion (1984) DIOCOGETIST PASISION/Wileying/First/Busion (1984) DECENTION (1984) DEC	Develop Key Sheet/Signature Sheet/Notes/Quantities-Pay items/Layout /Title Sheet		2	1		2	20			25	5
District District Position/Viennig/Fund Intel® Devices VLAN Greation 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Develop TMC Base Plan sheet with iTOC Placed		2	_		2	12	6		23	3
Communication Filian - Audio, volcido distribution 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Develop iTOC Operator Position/Viewing/Furniture Placement Details	2	4	2		2	12	6		28	2
Political Unit International Plans Political Unit International Plans Political Unit International Plans Political Unit Internation Plans Political Plans	Develop Communications Plan - audio, video distribution	2	2	2		2	16	00		32	2
	Develop Virtual LAN (incorporate from Norman [1]	2	3	2			112	0 0		10	٠,
	Develop Electrical Circuits/Plan for all ITS component (high/low voltage)		2 *	2	60	7	ב מ	o		7 5	2
Productive/Nateway details for two ITOCs Plans P	Develop Electrical Details/UPS Specification and Plans		2	2	12	4	6			26	1
Device System Integration (Integration (In	Develop Conduit/Raceway details for two ITOCs		2	2		2	œ	Ç0		22	1
Discribin/Irre/Irrination Plan 1	Develop Device System Integration (End Equipment) Wiring Plans		4	4			6	6		20	4
Acconstruction/Integration Support 2	iber Allocation/Termination Plan		4	7	á		80	6		20	1
Construction/Integration Support 8 34 28 74 20 134 114 0 412	Tan GOY CC/Colline II (Ness of Ises and Submission)		co		2	2	24	60		106	Two Submittals
Construction/Integration Support 8 15 2 8 34 III Attendence with Constructor/Status Review 16 15 15 2 8 4 4 34 III Attendence with Construction (RR) 16 15 15 15 15 15 2 8 4 4 4 14	iubtotal - ITS Plans	000	34	28	74	20	134	114	0	412	
Management/Schedule 8 16 2 8 34 Matendarice with Contractor/Status Review 16 16 8 2 4 4 4 4 17 Via Artendarice with Contractor/Status Review 16 16 8 2 2 4	3. TMC Construction/Integration Support										
	rolect Management/Schedule	00	16	2					8	34	
st for Information (RET) 2 2 2 2 4 4 94 usions/Update/Modification 2 2 2 2 4 4 92 tall all Review 2 8 8 2 2 4 4 32 Idon Test Support (On Site/review of results/update RTVM) 8 16 31 4 4 4 4 4 18 Item Test Support (On Site/review of results/update RTVM) 8 16 31 4 <t< td=""><td>Vieetin Attendance with Contractor/Status Review</td><td>16</td><td>16</td><td>16</td><td>50</td><td>2</td><td>8</td><td>4</td><td></td><td>70</td><td></td></t<>	Vieetin Attendance with Contractor/Status Review	16	16	16	50	2	8	4		70	
Existins/Update/Modification 2 2 2 2 8 8 22 tatal Review 2 8 8 4 2 4 4 4 32 ctor Test Plans Review 2 8 8 4 <td>request for Information (RFI)</td> <td></td> <td>2</td> <td>2</td> <td></td> <td>2</td> <td>4</td> <td>4</td> <td></td> <td>14</td> <td></td>	request for Information (RFI)		2	2		2	4	4		14	
18	Plan Revisions/Update/Modification		2	2		2	8	80		22	
Incorrest Support (On Site/review of results/update RTVM)	dull (dat neview	2	œ	000	4	2	4	4		32	
Ione Test Support (On Site/review of results/update RTVM) 8 5 2 2 24 Item Test Support (On Site/review of results/update RTVM) 8 16 37 4 4 4 4 72 Test Support (On Site/review of results/update RTVM) 8 8 32 4 4 2 7 60 Test Support (On Site/review of results/update RTVM) 8 8 32 32 20 60 Telans 4 2 7 30 20 48 2 2 20 48 It Plans 4 2 7 30 26 18 56 48 8 394 Lai - TMC/ITOC Constitruction Integration 48 80 110 26 18 56 48 8 394 Costs 58097 58971 54577 54588 51089 54074 545 77 546774 546 77 194	Contractor Test Plans Review	2	4	4	4		4			18	Surface Interest of
tem Test Supplort (On Site/review of results/update RTVM) 8	standalone Test Support (On Site/review of results/update RTVM)	4	60	.5			2/	2		24	systems integrator -Un
Test Support (On Site/review of results/update RTVM)	Subsystem Test Support (On Site/review of results/undate RTVM)	20	ă.	8			ž,ı			77	Systems Integrator -On
Trest Support (On Site/Feview of results/update RTVM)											Systems Integrator -On
t Plans 4 2 2 30 20 48 Ial-TMC/ITOC Constituction Integration 48 80 110 26 18 56 48 8 394 Costs 58097 59717 545577 52458 510635 546 774 545 875 510635 546 774 545 875 1994	ystem Test Support (On Site/review of results/update RTVM)	8	80	32		4	2	2		60	site
Initial TMC/ITOC Constituction Integration 48 80 110 26 18 56 48 8 394 104 190 178 148 68 326 248 32 1294 Costs \$38,097 \$49,717 \$46,577 \$24,598 \$10,635 \$42,714 \$43,500 \$43,775	As Built Plans				2	- 9.	20	20		Šī.	Systems Integrator -On site
Costs \$38,097 \$49,717 \$46,577 \$74,598 \$10,638 \$26 248 32 1294	Subtotal - TMC/ITOC Consttruction Integration	48	80	110	26	18	56	48	80	394	
Costs 436,097 549,717 546,577 57,548 510,635 544,714 545,674 5375 549,717 546,577 57,548	Hours	100	ŝ	178	140	n o	3	3.00	3	1	Total Table
the first the fi	Salary Costs	\$36,097	\$49,717	\$46,577	\$24,598	\$10,635	\$64,714	\$35,804	\$3,752	4671	\$271,894

BIOIAL - SALAKIES
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271,894

DIRECT NON-LABOR EXPENSES

Donner Printing (Proposition / Annual III			
pocument rinting/reproduction/Assembly	v	2,000.00	
Postage/ Freight/ Courier	ţ,	6,000.00	
Supplies/ Equipment	s	2,400.00	
Communications	s	*	
Survey Supplies	V.		
Aerial Photography	\$		
GPS Equipment	··	t	
Computer Modeling/ Software Use			
Traffic Counting Equipment	()		
Locator/Tracer/Thermal Imager Equipment	·s	9 :	
Travel Costs (Four persons - 1 time (kick-TMC/field visit) - 4 trips; and 3 systems int. trips- 2			
persons + 3 meetings) 16 trips	0	¢ 10 0/0 00	

If TOC (3) units cost estimates provided in another worksheet.
 City of Norman to provide base plans, VLAN support, and all existing data for commnications and electrical designs.
 If server room plan and connectivity information to be provided.

SUBTOTAL

302,134.25 30,240.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES

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S	to to	·v	\$	1/2	s	Ś	
19,840.00	20	76	×	24	12	2,400.00	

s

Rental Car 700.00 \$ 120.00 \$

Air

Hotel

320.00

Per Diem 100

Total \$ 1,240.00 Avg 2-day trip

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